

MORBIDITY &

MORTALITY

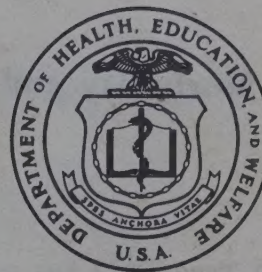
1973







# Morbidity and Mortality



U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION  
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## EPIDEMIOLOGIC NOTES AND REPORTS TUBERCULOSIS — Tennessee

In October 1971, a 30-year-old woman from Gallatin, Tennessee, had onset of respiratory symptoms, including chest pain and intermittent fever. She was treated by several local physicians, but her symptoms persisted, and in February 1972, she was hospitalized and treated for pneumonia. She continued to be ill, lost 40 pounds, and in May 1972, entered another hospital where a chest X-ray revealed a right middle lobe infiltrate and cavity. She had a 20 mm skin test reaction to 5 T.U. PPD tuberculin (intermediate strength), a positive histoplasmin skin test, and a histoplasmosis titer of 1:16. She gave no history of a previous tuberculin test, but a chest X-ray in June 1971 had been negative. She was diagnosed as having histoplasmosis but was nevertheless placed on isoniazid (INH) because of the possibility of active tuberculosis. Subsequently, 3 sputum cultures were positive for *Mycobacterium*

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*tuberculosis*, and she was later placed on a full therapeutic regimen.

Examination of the patient's family contacts revealed that her husband and an 8-year-old son had positive skin tests but normal chest films and were put on INH chemoprophylaxis. Another son, age 6, had active primary tuberculosis and was started on treatment. A 6-year-old daughter

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	1st WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST WEEK		
	January 6, 1973	January 8, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	23	44	36	23	44	36
Brucellosis	1	—	—	1	—	—
Chickenpox	2,721	1,921	—	2,721	1,921	—
Diphtheria	2	—	1	2	—	1
Encephalitis, primary:						
Arthropod-borne and unspecified	11	11	14	11	11	14
Encephalitis, post-infectious	1	4	9	1	4	9
Hepatitis, serum (Hepatitis B)	101	157	127	101	157	127
Hepatitis, infectious (Hepatitis A)	702	925	925	702	925	925
Malaria	3	37	37	3	37	37
Measles (rubeola)	368	549	524	368	549	524
Meningococcal infections, total	23	39	42	23	39	42
Civilian	22	37	41	22	37	41
Military	1	2	2	1	2	2
Mumps	1,104	1,624	1,770	1,104	1,624	1,770
Rubella (German measles)	134	244	304	134	244	304
Tetanus	—	—	—	—	—	—
Tuberculosis, new active	362	374	—	362	374	—
Tularemia	3	2	2	3	2	2
Typhoid fever	5	2	3	5	2	3
Typhus, tick-borne (Rky. Mt. spotted fever)	—	2	1	—	2	1
Venereal Diseases:						
Gonorrhea	10,475	11,497	—	10,475	11,497	—
Syphilis, primary and secondary	357	313	—	357	313	—
Rabies in animals	30	64	51	30	64	51

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax	—	Poliomyelitis, total:	—
Botulism	—	Paralytic:	—
Congenital rubella syndrome	—	Psittacosis	—
Leprosy	—	Rabies in man	—
Leptospirosis: Ohio-1	1	Trichinosis	—
Plague	—	Typhus, murine	—

## TUBERCULOSIS — Continued

had a 5 mm tuberculin reaction in June 1972 but was not placed on chemoprophylaxis. In September 1972, she was admitted to a hospital with ascites, a calcified primary complex on chest X-ray, and a 20 mm tuberculin reaction. Despite failure to culture *M. tuberculosis* from gastric washings, ascitic fluid, cerebrospinal fluid, and bone marrow, a diagnosis of tuberculosis peritonitis was made. She was started on anti-tuberculosis therapy and improved. Three of the 4 grandparents of these children had positive tuberculin tests, and 2 of them had suspicious chest X-rays. Further diagnostic tests on the grandparents are pending.

The brother of the 1st patient gave a history of skin test conversion while in the Peace Corps in Guatemala in 1965, and his Guatemalan wife, who reportedly had a negative skin test and chest X-ray when she entered the United States 6 years ago, was found to have a positive tuberculin test and active primary tuberculosis in November 1971. She and her husband were placed on INH chemoprophylaxis. Their 4 children were tuberculin negative.

(Reported by H. R. Anderson, M.D., Chief, Tuberculosis Control Program, Isabel Daggett, Mitzie Wilhite, and Ellen Hix, Public Health Nurses, and Robert H. Hutcheson, Jr., M.D., State Epidemiologist, Tennessee Department of Public Health; and an EIS Officer.)

## Editorial Note

As illustrated in this report, tuberculosis is usually diagnosed in individuals seeking medical attention because of respiratory symptoms and subsequently in their close family contacts. Tuberculosis should always be suspected in a person with respiratory symptoms, particularly when associated with an abnormal chest X-ray and a positive tuberculin test, as in the 1st patient.

The probable tuberculous peritonitis in the 6-year-old daughter might have been avoided, if she had been given preventive treatment with INH at the time of her initial examination. It is recommended that all household contacts of a patient with active tuberculosis, including those with less than a 10 mm reaction to a 5 T.U. PPD-tuberculin Mantoux test, should receive preventive therapy (1). Those who react to the test by developing 5 mm or more of induration should remain on the drug for the full 12-month course. Those with less than 5 mm reaction should be retested 3 months after their last contact with the active case. If the contact has been assuredly broken and if the skin test reaction is still negative, preventive therapy may be discontinued. When exposure to the active case may be continuous, it is desirable to give preventive therapy to tuberculin negative contacts for as long as exposure continues.

## Reference

1. American Thoracic Society, National Tuberculosis and Respiratory Disease Association, and the Center for Disease Control: Preventive Treatment of Tuberculosis. Am Rev Resp Dis 104:460-463, 1971

CURRENT TRENDS  
INFLUENZA — California, Illinois

## California

Influenza is now widespread in the San Francisco Bay area. Furthermore, A/England/42/72 viral isolations have been made in Los Angeles and San Diego.

(Reported by James Chin, M.D., State Epidemiologist, California State Department of Public Health.)

## Illinois

The Chicago Health Department reports an outbreak of influenza in the city, where emergency room visits are increased above normal seasonal levels. Influenzavirus similar to A/England/42/72 has been identified at the University of Chicago pediatric clinic.

(Reported by Marc Beem, M.D., University of Chicago School of Medicine; Olga Brolnitsky, M.D., Chicago Health Department; and Byron J. Francis, M.D., State Epidemiologist, Illinois Department of Public Health.)

## Editorial Note

Influenza has now been identified in 18 states: Arizona, Connecticut, Massachusetts, New Jersey, New York, Georgia, North Carolina, Colorado, Kansas, Texas, Pennsylvania, Maryland, Washington, Illinois, California, Tennessee, Hawaii, and Iowa. Outbreaks of influenza have been reported in New York, Boston, Chicago, Memphis, the Baltimore-Washington, D.C. area, and the San Francisco Bay area. The rest of the

Table 1  
Influenza Laboratory Surveillance — United States

Week Ending	Number of Laboratories Participating	Viral Isolation		Paired Sera	
		Number Tested	Number Isolates	Number Tested	Number Positive
11/17/72	14	92	3 <sup>1</sup>	157	0
11/24/72	27	122	2	225	6
12/1/72	36	279	4 <sup>2</sup>	343	1
12/8/72	37	235	22 <sup>3</sup>	261	0
12/15/72	37	392	8 <sup>4</sup>	178	4
12/22/72	38	349	29	171	10 <sup>5</sup>
12/29/72	32	288	17 <sup>6</sup>	114	5

<sup>1</sup>One isolate was influenza B.

<sup>2</sup>Three isolates were influenza B.

<sup>3</sup>Eight isolates were influenza B and were reported from Hawaii.

<sup>4</sup>Two isolates were influenza B and were reported from Hawaii.

<sup>5</sup>Two were influenza B. One was reported from Colorado, and one from Hawaii.

<sup>6</sup>Five were influenza B and were reported from Hawaii.

country is reporting only sporadic cases, which is normal for this time of year.

Table 1 indicates the results of laboratory surveillance from the WHO cooperating laboratories throughout the country. For the 2-week period ending December 29, there was an increased number of influenza isolates, compared with previous weeks.

SURVEILLANCE SUMMARY  
MEASLES – United States, Last 12 Weeks, 1972

In the last 12 weeks of 1972, 4,071 cases of measles were reported in the United States (Figure 1). This represents a decrease of 13% from the 4,664 cases recorded for the comparable period in 1971. This is in marked contrast to the 62% reduction in cases for the first 40 weeks of 1972, compared with the similar period in 1971.

The highest incidence rates were in the New England, East North Central, and West North Central regions. New Hampshire's incidence was 223.0 cases per 100,000 children under 18 years of age, followed by Iowa (38.7), Massachusetts (25.8), Wisconsin (24.2), and Connecticut (23.7) (Figure 2).

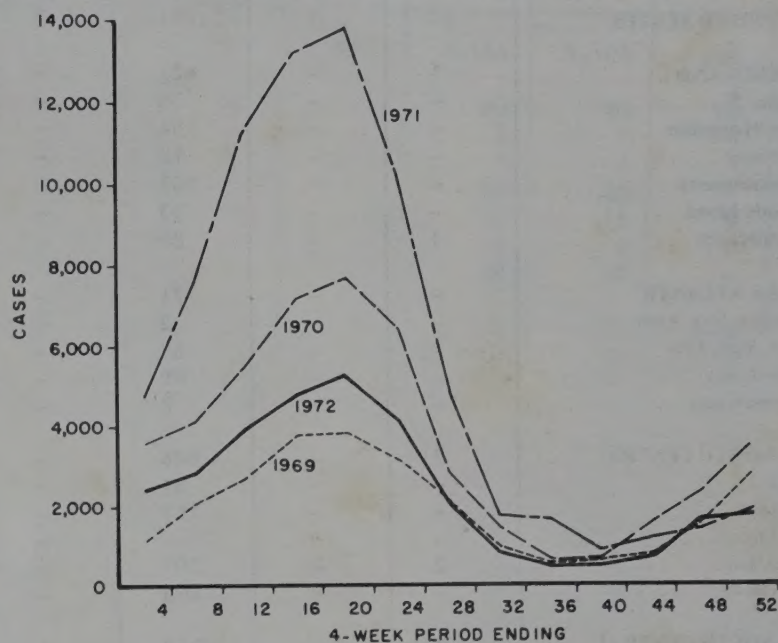
Thirteen states (New Hampshire, Massachusetts, Connecticut, New York, Illinois, Minnesota, Missouri, North Dakota, Delaware, Arkansas, Montana, Idaho, and Oregon) showed an increase in the number of reported cases in the last 12 weeks of 1972 over the comparable period in 1971; all other states showed a decrease.

(Reported by the Field Services Branch, Epidemiology Program, and the Immunization Branch, State and Community Services Division, CDC.)

#### Editorial Note

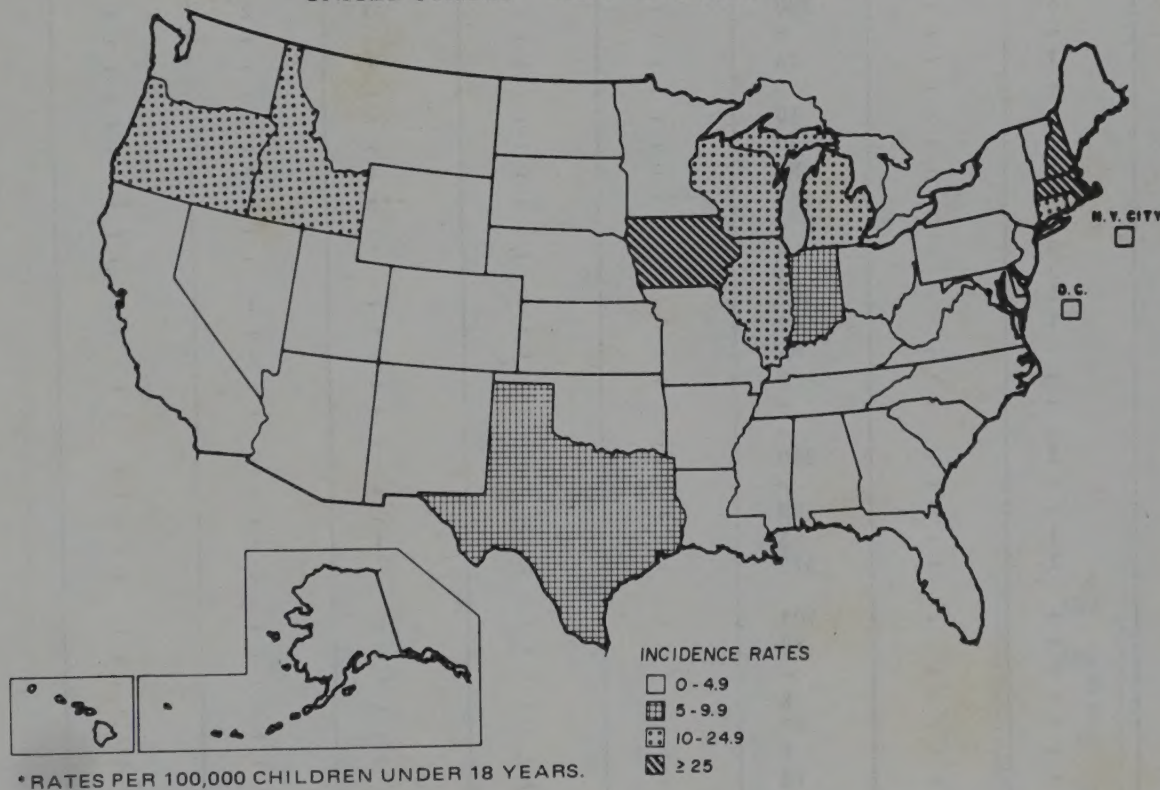
The large number of states reporting an increased number of measles cases is alarming as the beginning of the peak months of measles incidence approaches. Outbreaks that have

Figure 1  
REPORTED CASES OF MEASLES, BY 4-WEEK PERIODS  
UNITED STATES – 1969-1972



recently been investigated continue to demonstrate that the large number of reported cases have resulted from large pools of susceptible children.

Figure 2  
INCIDENCE RATES\* OF REPORTED MEASLES CASES, BY STATE  
UNITED STATES – LAST 12 WEEKS, 1972



\* RATES PER 100,000 CHILDREN UNDER 18 YEARS.

#### EPIDEMIOLOGIC NOTES AND REPORTS CLOSTRIDIUM PERFRINGENS GASTROENTERITIS – Washington

On Nov. 1, 1972, approximately 130 of 140 persons from Bellevue, Washington, had acute gastroenteritis after attending a church banquet at a local school. An investigation was initiated after 2 complaints of possible food poisonings were reported by the Seattle Poison Control Center.

A telephone survey of 38 persons in 22 homes revealed 35 persons ill with diarrhea (100%) and abdominal pain (83%).

Incubation periods ranged from 8 to 15 hours with a median of 10 hours. The majority of those ill recovered within 24 hours. *Clostridium perfringens* was isolated from 10 stool specimens by the Seattle-King County Health Department Laboratory.

Investigation revealed that the food served at the banquet  
(Continued on page 8)

## Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JANUARY 6, 1973 AND JANUARY 8, 1972 (1st WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES .....	23	1	2,721	2	2	11	11	1	101	702	925
NEW ENGLAND .....	1	-	427	-	-	2	-	1	9	61	66
Maine *	-	-	88	-	-	-	-	-	-	3	13
New Hampshire	-	-	54	-	-	-	-	-	3	4	11
Vermont	-	-	10	-	-	-	-	-	-	1	7
Massachusetts	-	-	102	-	-	1	-	-	1	33	16
Rhode Island	-	-	93	-	-	-	-	-	1	8	5
Connecticut	1	-	80	-	-	1	-	1	4	12	14
MIDDLE ATLANTIC .....	-	-	71	-	-	2	1	-	37	128	144
Upstate New York	-	-	2	-	-	-	1	-	12	35	22
New York City	-	-	61	-	-	2	-	-	10	23	42
New Jersey	-	-	NN	-	-	-	-	-	5	39	80
Pennsylvania	-	-	8	-	-	-	-	-	10	31	-
EAST NORTH CENTRAL .....	2	-	886	-	-	1	5	-	18	98	162
Ohio	-	-	51	-	-	-	3	-	4	26	43
Indiana	-	-	167	-	-	-	-	-	-	-	2
Illinois	-	-	-	-	-	1	1	-	-	13	23
Michigan	2	-	205	-	-	-	1	-	7	53	91
Wisconsin	-	-	463	-	-	-	-	-	7	6	3
WEST NORTH CENTRAL .....	1	-	233	2	2	2	-	-	2	17	25
Minnesota	-	-	-	-	-	-	-	-	-	1	2
Iowa	1	-	159	-	-	2	-	-	2	1	6
Missouri	-	-	26	-	-	-	-	-	-	12	10
North Dakota *	-	-	16	-	-	-	-	-	-	-	6
South Dakota	-	-	-	2	2	-	-	-	-	3	1
Nebraska	-	-	32	-	-	-	-	-	-	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-
SOUTH ATLANTIC .....	6	-	380	-	-	3	2	-	10	109	95
Delaware	-	-	6	-	-	-	-	-	-	-	5
Maryland	1	-	24	-	-	1	-	-	1	21	4
District of Columbia	-	-	-	-	-	-	-	-	-	1	1
Virginia	-	-	10	-	-	-	-	-	1	3	17
West Virginia	1	-	340	-	-	-	-	-	-	15	14
North Carolina *	1	-	NN	-	-	1	2	-	4	31	13
South Carolina	---	---	---	---	-	---	-	---	---	---	8
Georgia	-	-	-	-	-	-	-	-	-	4	2
Florida	3	-	-	-	-	1	-	-	4	34	31
EAST SOUTH CENTRAL .....	1	-	107	-	-	-	1	-	1	41	64
Kentucky	1	-	102	-	-	-	-	-	-	20	33
Tennessee	-	-	NN	-	-	-	1	-	-	17	19
Alabama	-	-	5	-	-	-	-	-	1	4	10
Mississippi	-	-	-	-	-	-	-	-	-	-	2
WEST SOUTH CENTRAL .....	3	-	380	-	-	1	1	-	2	66	73
Arkansas *	-	-	-	-	-	-	-	-	-	6	1
Louisiana	-	-	NN	-	-	-	-	-	-	5	1
Oklahoma	1	-	5	-	-	1	1	-	2	14	23
Texas	2	-	375	-	-	-	-	-	-	41	48
MOUNTAIN .....	-	-	101	-	-	-	-	-	-	29	43
Montana	-	-	18	-	-	-	-	-	-	8	5
Idaho	-	-	-	-	-	-	-	-	-	10	9
Wyoming	-	-	6	-	-	-	-	-	-	-	-
Colorado	-	-	57	-	-	-	-	-	-	-	1
New Mexico	-	-	7	-	-	-	-	-	-	4	8
Arizona	-	-	13	-	-	-	-	-	-	3	13
Utah	-	-	-	-	-	-	-	-	-	1	7
Nevada	-	-	-	-	-	-	-	-	-	3	-
PACIFIC .....	9	1	136	-	-	-	1	-	22	153	253
Washington	1	-	97	-	-	-	-	-	1	33	25
Oregon	-	-	1	-	-	-	-	-	3	36	46
California	8	1	-	-	-	-	1	-	18	78	170
Alaska	-	-	9	-	-	-	-	-	-	-	5
Hawaii	-	-	29	-	-	-	-	-	-	6	7
Guam *	-	-	-	-	-	-	-	-	-	-	2
Puerto Rico	-	-	5	-	-	-	-	-	2	9	-
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports (1972): Aseptic meningitis: N.C. delete 1  
Chickenpox: Me. 19, Guam 4

Encephalitis, primary: N. Dak. 1  
Hepatitis A: Me. 3, Ark. delete 1, Guam 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JANUARY 6, 1973 AND JANUARY 8, 1972 (1st WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	3	3	368	368	549	23	23	39	1,104	1,104	134	134
NEW ENGLAND .....	—	—	132	132	14	3	3	—	63	63	10	10
Maine *	—	—	—	—	4	—	—	—	1	1	—	—
New Hampshire .....	—	—	22	22	—	1	1	—	1	1	—	—
Vermont .....	—	—	—	—	—	—	—	—	20	20	1	1
Massachusetts .....	—	—	70	70	—	1	1	—	11	11	9	9
Rhode Island .....	—	—	3	3	6	—	—	—	2	2	—	—
Connecticut .....	—	—	37	37	4	1	1	—	28	28	—	—
MIDDLE ATLANTIC .....	1	1	54	54	40	4	4	1	129	129	18	18
Upstate New York .....	1	1	1	1	1	—	—	—	NN	NN	3	3
New York City .....	—	—	36	36	9	2	2	1	98	98	5	5
New Jersey .....	—	—	16	16	30	1	1	—	7	7	10	10
Pennsylvania .....	—	—	1	1	—	1	1	—	24	24	—	—
EAST NORTH CENTRAL .....	—	—	71	71	242	3	3	4	315	315	43	43
Ohio .....	—	—	1	1	9	3	3	2	85	85	5	5
Indiana .....	—	—	—	—	26	—	—	—	26	26	12	12
Illinois .....	—	—	37	37	138	—	—	2	28	28	4	4
Michigan .....	—	—	15	15	29	—	—	—	71	71	8	8
Wisconsin .....	—	—	18	18	40	—	—	—	105	105	14	14
WEST NORTH CENTRAL .....	—	—	5	5	6	—	—	3	31	31	6	6
Minnesota .....	—	—	—	—	—	—	—	—	—	—	—	—
Iowa .....	—	—	5	5	4	—	—	—	13	13	3	3
Missouri .....	—	—	—	—	2	—	—	—	5	5	—	—
North Dakota .....	—	—	—	—	—	—	—	—	2	2	1	1
South Dakota .....	—	—	—	—	—	—	—	—	—	—	—	—
Nebraska .....	—	—	—	—	—	—	—	1	11	11	2	2
Kansas .....	—	—	—	—	—	—	—	2	—	—	—	—
SOUTH ATLANTIC .....	2	2	6	6	116	3	3	14	139	139	9	9
Delaware .....	—	—	—	—	—	—	—	1	12	12	—	—
Maryland .....	—	—	—	—	—	1	1	—	29	29	—	—
District of Columbia .....	—	—	—	—	—	—	—	—	—	—	—	—
Virginia .....	1	1	—	—	—	1	1	3	7	7	—	—
West Virginia *	—	—	3	3	1	—	—	2	82	82	6	6
North Carolina .....	1	1	2	2	4	1	1	4	NN	NN	2	2
South Carolina .....	—	—	—	—	4	—	—	2	—	—	—	—
Georgia .....	—	—	—	—	—	—	—	—	—	—	—	—
Florida .....	—	—	1	1	107	—	—	2	9	9	1	1
EAST SOUTH CENTRAL .....	—	—	10	10	20	3	3	2	58	58	6	6
Kentucky .....	—	—	1	1	6	3	3	2	16	16	—	—
Tennessee .....	—	—	—	—	12	—	—	—	42	42	4	4
Alabama .....	—	—	—	—	2	—	—	—	—	—	2	2
Mississippi .....	—	—	9	9	—	—	—	—	—	—	—	—
WEST SOUTH CENTRAL .....	—	—	30	30	21	3	3	—	130	130	14	14
Arkansas .....	—	—	—	—	—	—	—	—	1	1	—	—
Louisiana .....	—	—	—	—	—	—	—	—	—	—	—	—
Oklahoma .....	—	—	1	1	1	—	—	—	6	6	1	1
Texas .....	—	—	29	29	20	3	3	—	123	123	13	13
MOUNTAIN .....	—	—	14	14	51	1	1	1	100	100	7	7
Montana .....	—	—	—	—	—	—	—	—	5	5	—	—
Idaho .....	—	—	1	1	—	—	—	—	2	2	2	2
Wyoming .....	—	—	—	—	—	—	—	1	16	16	—	—
Colorado .....	—	—	8	8	39	—	—	—	2	2	3	3
New Mexico .....	—	—	3	3	—	—	—	—	20	20	1	1
Arizona .....	—	—	2	2	12	1	1	—	55	55	—	—
Utah .....	—	—	—	—	—	—	—	—	—	—	—	—
Nevada .....	—	—	—	—	—	—	—	—	—	—	1	1
PACIFIC .....	—	—	46	46	39	3	3	14	139	139	21	21
Washington .....	—	—	26	26	17	—	—	—	10	10	6	6
Oregon .....	—	—	8	8	1	—	—	—	60	60	2	2
California .....	—	—	10	10	21	3	3	14	56	56	13	13
Alaska .....	—	—	—	—	—	—	—	—	12	12	—	—
Hawaii .....	—	—	2	2	—	—	—	—	1	1	—	—
Guam *	—	—	—	—	—	—	—	—	—	—	—	—
Puerto Rico .....	—	—	20	20	—	—	—	—	3	3	2	2
Virgin Islands .....	—	—	—	—	—	—	—	—	—	—	—	—

\*Delayed reports (1972): Measles: Me. 2, Guam 1  
Mumps: Me. 10, W. Va. 39, Guam 1  
Rubella: Me. 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JANUARY 6, 1973 AND JANUARY 8, 1972 (1st WEEK) - Continued

AREA	TETANUS Cumulative	TB (New Active)	TULAREMIA		TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
									GONOR- RHEA	SYPHILIS (Pri. & Sec.)		
									1973	1973		
	1973	1973	1973	Cum. 1973	1973	Cum. 1973	1973	Cum. 1973	1973	1973	1973	Cum. 1973
UNITED STATES .....	-	362	3	3	5	5	-	-	10,475	357	30	30
NEW ENGLAND .....	-	13	-	-	-	-	-	-	373	10	1	1
Maine .....	-	-	-	-	-	-	-	-	21	-	1	1
New Hampshire *	-	-	-	-	-	-	-	-	9	-	-	-
Vermont .....	-	-	-	-	-	-	-	-	4	-	-	-
Massachusetts .....	-	11	-	-	-	-	-	-	205	8	-	-
Rhode Island .....	-	1	-	-	-	-	-	-	59	1	-	-
Connecticut .....	-	1	-	-	-	-	-	-	75	1	-	-
MIDDLE ATLANTIC .....	-	86	-	-	3	3	-	-	1,472	84	-	-
Upstate New York .....	-	26	-	-	-	-	-	-	447	-	-	-
New York City .....	-	44	-	-	3	3	-	-	656	69	-	-
New Jersey .....	-	16	-	-	-	-	-	-	161	9	-	-
Pennsylvania .....	-	-	-	-	-	-	-	-	208	6	-	-
EAST NORTH CENTRAL .....	-	61	-	-	1	1	-	-	1,479	19	8	8
Ohio *	-	50	-	-	-	-	-	-	661	3	-	-
Indiana .....	-	2	-	-	-	-	-	-	96	5	1	1
Illinois *	-	-	-	-	-	-	-	-	207	1	1	1
Michigan .....	-	-	-	-	1	1	-	-	388	10	-	-
Wisconsin .....	-	9	-	-	-	-	-	-	127	-	6	6
WEST NORTH CENTRAL .....	-	7	1	1	-	-	-	-	777	-	11	11
Minnesota .....	-	-	-	-	-	-	-	-	105	-	1	1
Iowa .....	-	5	-	-	-	-	-	-	82	-	5	5
Missouri .....	-	-	1	1	-	-	-	-	391	-	1	1
North Dakota .....	-	-	-	-	-	-	-	-	10	-	1	1
South Dakota .....	-	1	-	-	-	-	-	-	37	-	3	3
Nebraska .....	-	1	-	-	-	-	-	-	40	-	-	-
Kansas .....	-	-	-	-	-	-	-	-	112	-	-	-
SOUTH ATLANTIC .....	-	72	-	-	1	1	-	-	2,517	124	3	3
Delaware .....	-	2	-	-	-	-	-	-	63	-	-	-
Maryland .....	-	6	-	-	-	-	-	-	261	10	-	-
District of Columbia .....	-	10	-	-	-	-	-	-	275	15	-	-
Virginia .....	-	6	-	-	-	-	-	-	260	50	1	1
West Virginia *	-	2	-	-	-	-	-	-	56	-	2	2
North Carolina *	-	16	-	-	-	-	-	-	421	13	-	-
South Carolina .....	-	---	---	---	---	---	---	---	---	---	---	---
Georgia .....	-	15	-	-	-	-	-	-	383	12	-	-
Florida .....	-	15	-	-	1	1	-	-	798	24	-	-
EAST SOUTH CENTRAL .....	-	31	-	-	-	-	-	-	841	30	3	3
Kentucky .....	-	4	-	-	-	-	-	-	128	14	1	1
Tennessee .....	-	8	-	-	-	-	-	-	427	6	2	2
Alabama .....	-	17	-	-	-	-	-	-	139	5	-	-
Mississippi .....	-	2	-	-	-	-	-	-	147	5	-	-
WEST SOUTH CENTRAL .....	-	6	2	2	-	-	-	-	1,318	19	2	2
Arkansas .....	-	4	-	-	-	-	-	-	196	1	-	-
Louisiana *	-	-	-	-	-	-	-	-	179	6	-	-
Oklahoma *	-	2	2	2	-	-	-	-	134	1	2	2
Texas .....	-	-	-	-	-	-	-	-	809	11	-	-
MOUNTAIN .....	-	24	-	-	-	-	-	-	276	10	-	-
Montana .....	-	-	-	-	-	-	-	-	34	-	-	-
Idaho .....	-	-	-	-	-	-	-	-	30	-	-	-
Wyoming .....	-	-	-	-	-	-	-	-	11	1	-	-
Colorado .....	-	-	-	-	-	-	-	-	93	5	-	-
New Mexico .....	-	6	-	-	-	-	-	-	-	-	-	-
Arizona *	-	18	-	-	-	-	-	-	69	4	-	-
Utah .....	-	-	-	-	-	-	-	-	11	-	-	-
Nevada .....	-	-	-	-	-	-	-	-	28	-	-	-
PACIFIC .....	-	62	-	-	-	-	-	-	1,422	61	2	2
Washington .....	-	5	-	-	-	-	-	-	190	-	-	-
Oregon .....	-	-	-	-	-	-	-	-	123	1	-	-
California .....	-	55	-	-	-	-	-	-	1,025	59	2	2
Alaska .....	-	-	-	-	-	-	-	-	42	-	-	-
Hawaii .....	-	2	-	-	-	-	-	-	42	1	-	-
Guam *	-	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	1	-	-	-	-	-	-	20	4	1	1
Virgin Islands .....	-	-	-	-	-	-	-	-	6	-	-	-

\*Delayed reports (1972): TB: N.H. 1, Ohio delete 1, Ill. 53, N.C. delete 2, La. delete 1  
Gonorrhea: Guam 7

Syphilis: Okla. delete 1  
Rabies in animals: W. Va. 1, Ariz. 1

# Morbidity and Mortality Weekly Report

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING JANUARY 6, 1973

Week No.

1

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
<b>NEW ENGLAND</b>	788	491	20	52	<b>SOUTH ATLANTIC</b>	1,142	649	37	53
Boston, Mass.	211	113	7	16	Atlanta, Ga.	120	56	6	5
Bridgeport, Conn.	33	19	—	1	Baltimore, Md.	252	147	4	11
Cambridge, Mass.	31	22	—	8	Charlotte, N. C.	60	31	3	—
Fall River, Mass.	26	20	—	1	Jacksonville, Fla.	66	39	5	2
Hartford, Conn.	57	34	1	—	Miami, Fla.	89	46	4	2
Lowell, Mass.	32	22	—	2	Norfolk, Va.	63	34	—	4
Lynn, Mass.	18	11	—	—	Richmond, Va.	99	63	1	8
New Bedford, Mass.	33	24	1	1	Savannah, Ga.	37	18	2	4
New Haven, Conn.	72	42	6	5	St. Petersburg, Fla.	112	85	2	8
Providence, R. I.	63	37	2	7	Tampa, Fla.	105	55	5	5
Somerville, Mass.	11	8	—	2	Washington, D. C.	60	23	3	2
Springfield, Mass.	53	35	2	2	Wilmington, Del.	79	52	2	2
Waterbury, Conn.	51	39	—	1					
Worcester, Mass.	97	65	1	6	<b>EAST SOUTH CENTRAL</b>	585	323	32	28
					Birmingham, Ala.	70	42	6	2
<b>MIDDLE ATLANTIC</b>	3,374	2,081	109	204	Chattanooga, Tenn.	62	33	2	3
Albany, N. Y.	45	32	2	2	Knoxville, Tenn.	48	32	2	3
Allentown, Pa.	30	20	—	2	Louisville, Ky.	100	54	6	8
Buffalo, N. Y.	150	95	5	16	Memphis, Tenn.	132	66	9	2
Camden, N. J.	54	32	3	4	Mobile, Ala.	43	24	—	2
Elizabeth, N. J.	43	23	3	2	Montgomery, Ala.	27	14	—	1
Erie, Pa.	32	22	1	2	Nashville, Tenn.	103	58	7	7
Jersey City, N. J.	83	57	2	3					
Newark, N. J.	88	49	4	3	<b>WEST SOUTH CENTRAL</b>	1,323	710	69	56
New York City, N. Y.†	1,729	1,063	51	102	Austin, Tex.	37	21	1	1
Paterson, N. J.	60	34	6	6	Baton Rouge, La.	38	19	—	1
Philadelphia, Pa.	398	219	14	9	Corpus Christi, Tex.	42	26	4	4
Pittsburgh, Pa.	244	158	5	30	Dallas, Tex.	230	110	7	2
Reading, Pa.	37	29	1	1	El Paso, Tex.	39	17	7	2
Rochester, N. Y.	109	77	3	6	Fort Worth, Tex.	117	70	11	5
Schenectady, N. Y.	24	19	—	—	Houston, Tex.	220	105	18	10
Scranton, Pa.	31	17	1	1	Little Rock, Ark.	59	38	—	4
Syracuse, N. Y.	96	58	2	—	New Orleans, La.	187	97	4	6
Trenton, N. J.	54	30	4	3	Oklahoma City, Okla.*	93	53	5	3
Utica, N. Y.	15	13	—	—	San Antonio, Tex.	153	92	7	8
Yonkers, N. Y.	52	34	2	12	Shreveport, La.	37	18	1	4
					Tulsa, Okla.	71	44	4	6
<b>EAST NORTH CENTRAL</b>	2,862	1,668	102	108	<b>MOUNTAIN</b>	590	358	17	32
Akron, Ohio	65	34	5	—	Albuquerque, N. Mex.	62	33	2	11
Canton, Ohio	42	21	1	4	Colorado Springs, Colo.	41	30	3	4
Chicago, Ill.	875	472	28	34	Denver, Colo.	140	88	3	6
Cincinnati, Ohio	200	125	4	7	Las Vegas, Nev.	21	15	—	1
Cleveland, Ohio	232	133	4	4	Ogden, Utah	27	18	—	—
Columbus, Ohio	138	80	6	8	Phoenix, Ariz.	142	73	6	4
Dayton, Ohio	119	65	2	3	Pueblo, Colo.	26	21	—	2
Detroit, Mich.	323	179	17	9	Salt Lake City, Utah	54	30	2	1
Evansville, Ind.	39	27	—	1	Tucson, Ariz.	77	50	1	3
Fort Wayne, Ind.	52	34	3	2					
Gary, Ind.	56	28	3	3	<b>PACIFIC</b>	1,796	1,131	35	79
Grand Rapids, Mich.	56	34	—	6	Berkeley, Calif.	30	21	—	1
Indianapolis, Ind.	139	82	3	6	Fresno, Calif.	70	37	5	4
Madison, Wis.	34	18	2	3	Glendale, Calif.	10	7	—	—
Milwaukee, Wis.	144	102	6	4	Honolulu, Hawaii	66	39	1	3
Peoria, Ill.	57	36	5	—	Long Beach, Calif.	112	70	1	2
Rockford, Ill.	42	31	1	8	Los Angeles, Calif.	378	235	9	9
South Bend, Ind.	50	40	1	3	Oakland, Calif.	102	57	4	7
Toledo, Ohio	130	83	9	2	Pasadena, Calif.	38	28	—	—
Youngstown, Ohio	69	44	2	1	Portland, Oreg.	138	96	2	4
					Sacramento, Calif.	97	69	3	2
<b>WEST NORTH CENTRAL</b>	945	608	44	27	San Diego, Calif.	129	82	2	4
Des Moines, Iowa	59	34	3	—	San Francisco, Calif.	250	163	1	16
Duluth, Minn.	38	29	2	1	San Jose, Calif.	85	56	1	10
Kansas City, Kans.	47	19	8	—	Seattle, Wash.	190	112	5	10
Kansas City, Mo.	156	105	8	2	Spokane, Wash.	55	31	1	4
Lincoln, Nebr.	29	18	1	—	Tacoma, Wash.	46	28	—	3
Minneapolis, Minn.	134	95	3	7					
Omaha, Nebr.	81	48	7	1	<b>Total</b>	13,405	8,019	465	639
St. Louis, Mo.	262	166	7	6	<b>Expected Number</b>	13,505	7,930	561	555
St. Paul, Minn.	91	60	3	2	<b>Cumulative Total (includes reported corrections for previous weeks)</b>	13,405	8,019	465	639
Wichita, Kans.	48	34	2	8					

†Delayed report for week ending December 30, 1972

\*Estimate based on average percent of divisional total

**CLOSTRIDIUM PERFRINGENS** – Continued

had been prepared by a local caterer. The meal consisted of tossed salad with French and blue cheese dressing, beef stroganoff, string beans, buttered rolls, coffee, tea, punch, and blueberry tarts. Analysis of food history questionnaires failed to incriminate a specific food item because all guests ate the same foods. However, it was learned that the caterer tasted the beef stroganoff before it was served and became ill 10 hours later. *C. perfringens* was isolated from her stool.

The beef stroganoff had been prepared by the caterer on the day of the banquet. It had been simmered for 3 1/2 hours and transported to the school, where there were no facilities for reheating. It was then placed on a warming tray for an additional 3 1/2 hours at a temperature insufficient to prevent the multiplication of *C. perfringens*. The caterer added sour cream to the stroganoff prior to serving.

Following the investigation, the caterer, who was operating without a health department Food Establishment permit, was ordered to discontinue serving food to the public.

(Reported by Herbert W. Anderson, Environmental Epidemiologist, and A. H. B. Pedersen, M.D., Acting Director, Division of Epidemiology, Seattle-King County Department of Public Health; John A. Beare, M.D., Acting State Epidemiologist, Washington State Department of Social and Health Services, Health Services Division.)

**Editorial Note**

The symptoms and incubation period for the illness described in this outbreak are consistent with the diagnosis of *C. perfringens* food poisoning. Outbreaks of *C. perfringens* food poisoning usually involve a food that was cooked and then inadequately refrigerated and reheated before serving (1). Clinical illness is believed to be caused by an enterotoxin produced *in situ* (2).

In 1971, *C. perfringens* was responsible for 16% of all foodborne outbreaks reported to CDC; in most of these, laboratory confirmation was inadequate. To help establish *C. perfringens* as the cause of a foodborne outbreak, 3 laboratory tests are available: 1) demonstration of the same serotype of isolates from the stools of ill individuals and from the implicated food, 2) demonstration of larger numbers (greater than  $10^6$ ) of organisms in the implicated food and/or in the stools of affected individuals as compared with control subjects, and 3) demonstration of elevated levels of alpha toxin in the implicated food. Isolation of *C. perfringens* requires that incubation be under strictly anaerobic conditions or that the growth medium contain an active reducing agent (3).

**References**

1. Lowenstein MS: Epidemiology of *Clostridium perfringens* food poisoning. N Engl J Med 288:1026-1028, 1972
2. Hauscheld AHW: *Clostridium perfringens* enterotoxin. Journal of Milk and Food Technology 34:596, 1971
3. Smith L: Factors involved in the isolation of *Clostridium perfringens*. Journal of Milk and Food Technology 35:71, 1972

**Note to Readers:**

The delay in publishing the MMWR this week was due to the official closing of CDC on Monday, January 8, because of inclement weather.

The Morbidity and Mortality Weekly Report, circulation 30,500, is published by the Center for Disease Control, Atlanta, Ga.

Director, Center for Disease Control  
Director, Epidemiology Program, CDC  
Editor, MMWR

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Michael B. Gregg, M.D.

The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to:

Center for Disease Control  
Attn: Editor  
Morbidity and Mortality Weekly Report  
Atlanta, Georgia 30333

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
PUBLIC HEALTH SERVICE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION  
CENTER FOR DISEASE CONTROL  
ATLANTA, GEORGIA 30333

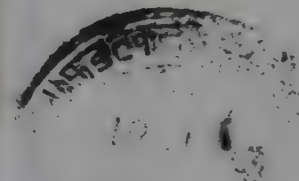
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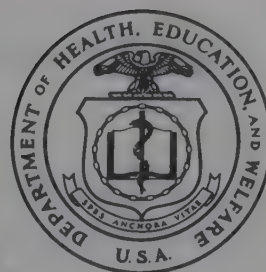


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# Morbidity and Mortality



U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

DATE OF RELEASE: JANUARY 19, 1973 - ATLANTA, GEORGIA 30333

## CURRENT TRENDS

### INFLUENZA - Worldwide, United States

#### WORLDWIDE

**USSR:** Widespread influenza-like illness has reached epidemic proportions in Moscow and Leningrad, and these cities are reporting 70,000 and 30,000 new cases of influenza daily. The virus responsible for the illness appears to be similar to A/England/42/72.

**United Kingdom:** Reports to public health officials note a decline in disease in southern England, but influenza continues to increase in northern England, particularly in the Midlands and East Anglia. A/England/42/72 virus has been isolated in large numbers from ill patients.

**France:** The Paris area is experiencing widespread influenza. Eight isolates of a virus similar to A/England/42/72 were obtained in December 1972.

(Reported by the World Health Organization: Weekly Epidemiological Record, Vol. 48, No. 2, Jan. 12, 1973.)

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## UNITED STATES

**Georgia:** Isolated outbreaks of acute respiratory disease have been reported in Georgia, and 1 college of 1,400 students in northern Georgia has been closed because of respiratory illness in approximately 25% of the student body. Eight iso-

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	2nd WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 2 WEEKS		
	January 13, 1973	January 15, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis . . . . .	49	40	29	72	84	65
Brucellosis . . . . .	-	4	1	1	4	2
Chickenpox . . . . .	4,079	3,329	- - -	6,809	5,250	- - -
Diphtheria . . . . .	-	4	4	2	4	4
Encephalitis, primary:						
Arthropod-borne and unspecified . . . . .	7	20	20	18	31	35
Encephalitis, post-infectious . . . . .	2	1	3	3	5	12
Hepatitis, serum (Hepatitis B) . . . . .	138	164	123	240	321	250
Hepatitis, infectious (Hepatitis A) . . . . .	868	1,102	1,057	1,576	2,027	2,003
Malaria . . . . .	3	104	50	6	141	90
Measles (rubeola) . . . . .	631	650	650	1,000	1,199	1,199
Meningococcal infections, total . . . . .	27	27	67	50	66	115
Civilian . . . . .	23	26	64	45	63	108
Military . . . . .	4	1	3	5	3	3
Mumps . . . . .	1,334	2,303	2,466	2,441	3,927	4,236
Rubella (German measles) . . . . .	336	377	449	470	621	753
Tetanus . . . . .	-	-	-	-	-	-
Tuberculosis, new active . . . . .	447	459	- - -	809	833	- - -
Tularemia . . . . .	1	2	2	4	4	4
Typhoid fever . . . . .	1	6	6	6	8	10
Typhus, tick-borne (Rky. Mt. spotted fever) . . . . .	1	2	-	1	4	1
Venereal Diseases:						
Gonorrhea . . . . .	14,374	13,365	- - -	25,181	24,862	- - -
Syphilis, primary and secondary . . . . .	571	445	- - -	940	758	- - -
Rabies in animals . . . . .	49	57	57	79	121	121

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax: . . . . .	-	Poliomyelitis, total: . . . . .	-
Botulism: . . . . .	-	Paralytic: . . . . .	-
Congenital rubella syndrome: Calif. - 1 . . . . .	1	Psittacosis: . . . . .	-
Leprosy: N.J. - 1 . . . . .	1	Rabies in man: . . . . .	-
Leptospirosis: Hawaii - 1 . . . . .	2	Trichinosis: N.J. - 4 . . . . .	4
Plague: . . . . .	-	Typhus, murine: . . . . .	-

**INFLUENZA – Continued**

lates of A/England/42/72 have been obtained in Atlanta; however, emergency room visits and industrial absenteeism are normal for this time of year.

(Reported by William Marine, M.D., Professor, Department of Preventive Medicine and Community Health, Emory University School of Medicine; Maurice Miot, Virology Laboratory, and John E. McCroan, Ph.D., Chief, Epidemiology Unit, Division of Physical Health, Georgia State Department of Human Resources.)

**Louisiana:** An increase in respiratory illness has been reported in New Orleans, and 1 influenza A virus has been isolated. However, school and industrial absenteeism have not apparently increased.

(Reported by Charles T. Caraway, D.V.M., State Epidemiologist, Louisiana State Department of Health.)

**Virginia:** The State Department of Health notes increased incidence of respiratory illness with some school and industrial absenteeism in Richmond, Norfolk, and Portsmouth, but influenza appears to be confined to isolated outbreaks scattered throughout the state, and clinically, the disease appears to be relatively mild. An outbreak was reported in a veterans' hospital, with no recorded deaths.

(Reported by Karl A. Western, M.D., State Epidemiologist, Virginia State Department of Health.)

**Washington:** Isolated outbreaks of acute respiratory disease have been reported throughout the state, and some schools have been closed. Increased industrial absenteeism has not yet been reported, however. Clinically, the disease appears to be fairly severe, with many patients reporting persistence of symptoms for 1 week. The disease appears to have spread fairly rapidly in the last 7 to 10 days.

(Reported by John A. Beare, M.D., Acting State Epidemiologist, Washington Department of Social and Health Services, Health Services Division.)

**Editorial Note**

CDC has received reports of confirmed influenza type A or influenza-like disease in 24 states, representing each major geographic area of the country. These states are Arizona, California, Colorado, Connecticut, Georgia, Hawaii, Illinois, Iowa, Kansas, Louisiana, Maryland, Massachusetts, Michigan, Nevada, New Jersey, New Mexico, New York, North Carolina, Pennsylvania, Tennessee, Texas, Utah, Virginia, and Washington. Although major outbreaks are continuing in the metropolitan areas of Boston, Chicago, New York, Pittsburgh, San Francisco, and Washington, D.C., the remainder of the outbreaks reported by the states appear to be localized (Figure 1). Widespread outbreaks involving more than one-half of a state's population have not yet appeared. The etiologic agent in all states reporting virus isolations appears to be A/England/42/72.

Figures 2 and 3 show mortality data from 122 reporting cities. National pneumonia and influenza mortality has been above the epidemic threshold for 2 weeks and is, therefore, significant. The number of pneumonia and influenza deaths is below last year's level. The Mid-Atlantic and Pacific regions have had significantly increased mortality for 2 consecutive weeks.

CDC has received only a few reports of school closings and of marked industrial absenteeism, but many states report an increase in visits to physicians' offices, visits to hospital emergency rooms, and hospital admissions. Reports of clinical severity vary.

Figure 1  
INFLUENZA SURVEILLANCE – UNITED STATES, JAN. 13, 1973

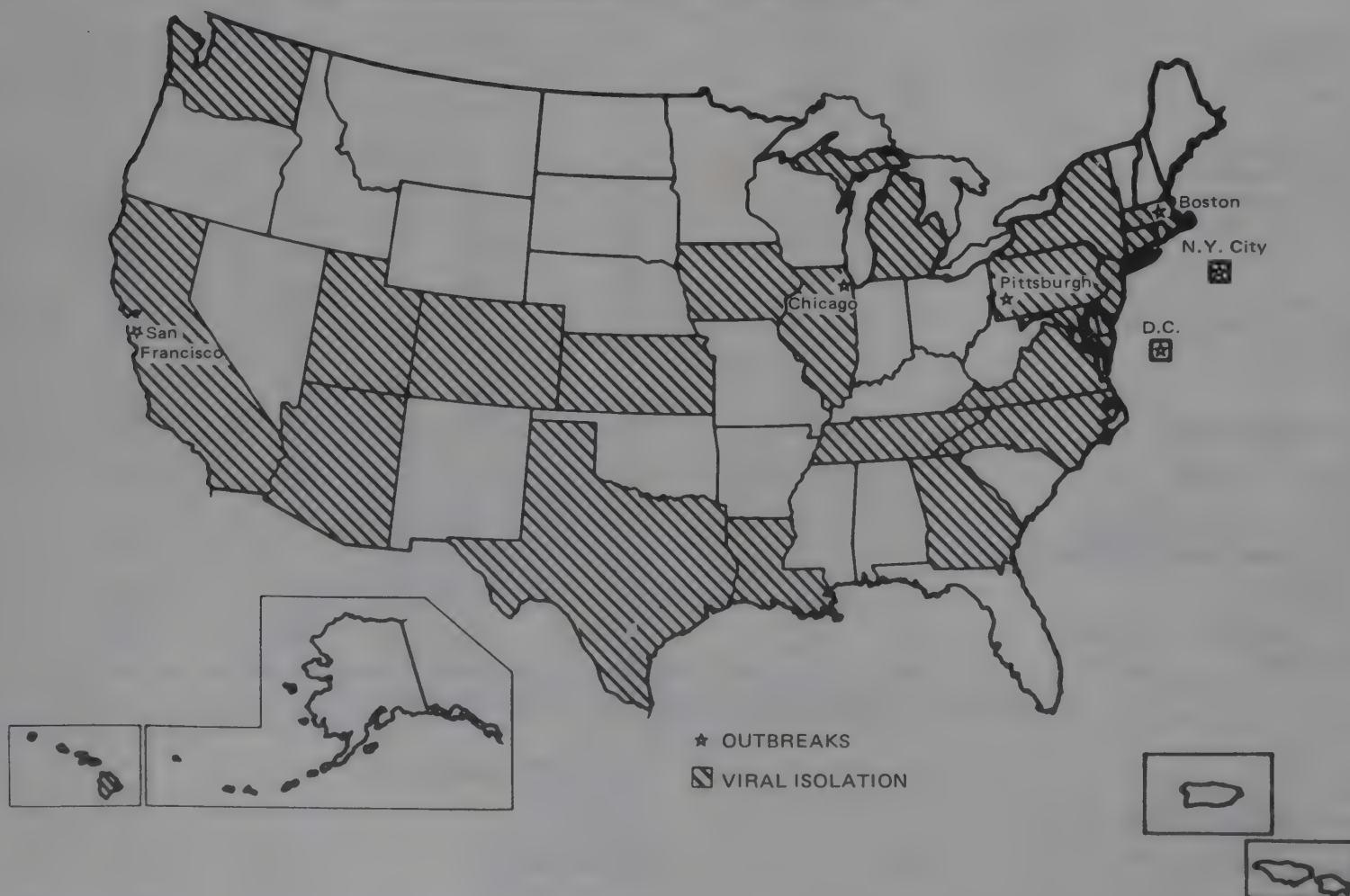


Figure 2  
PNEUMONIA-INFLUENZA DEATHS IN 122 UNITED STATES CITIES

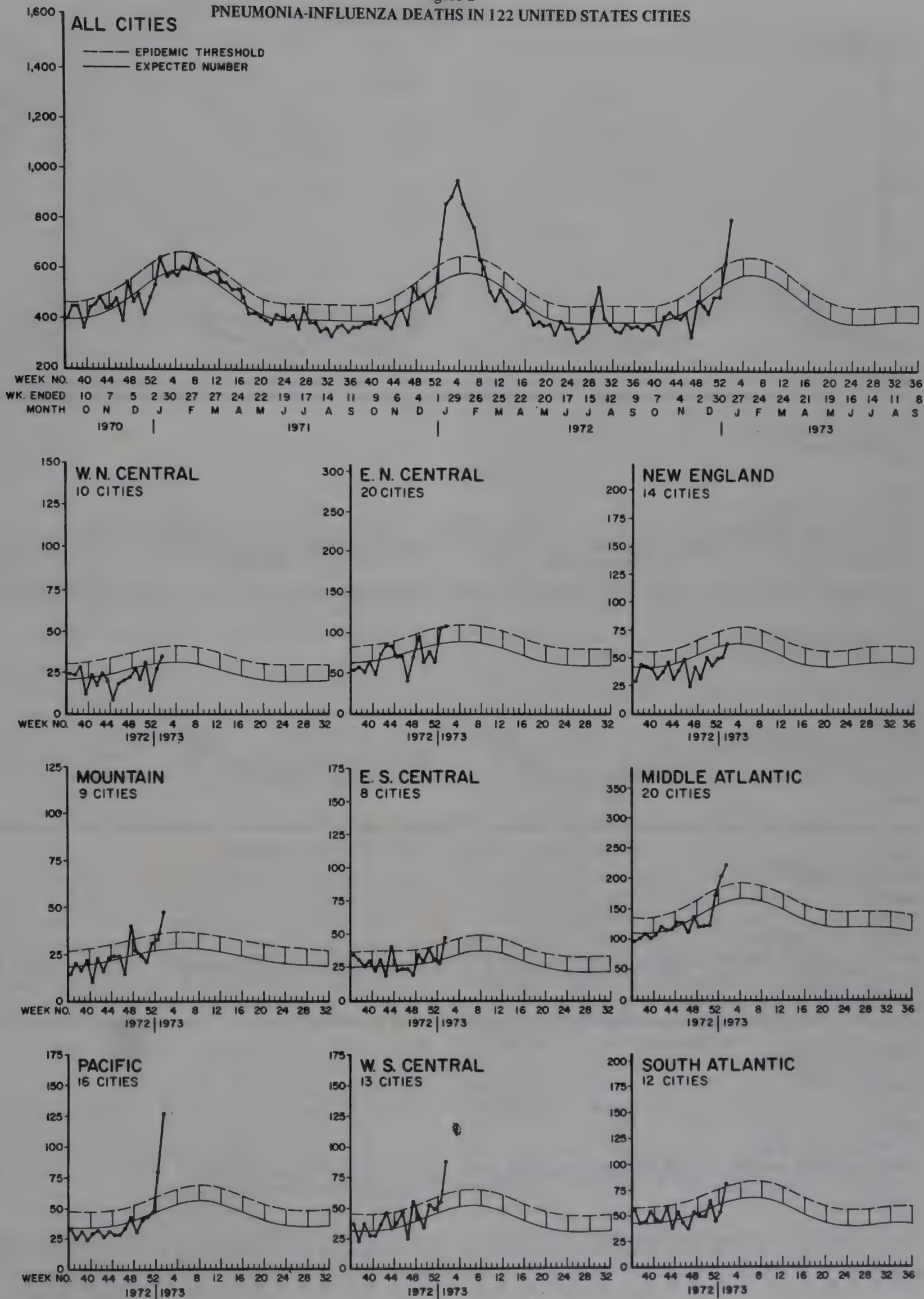
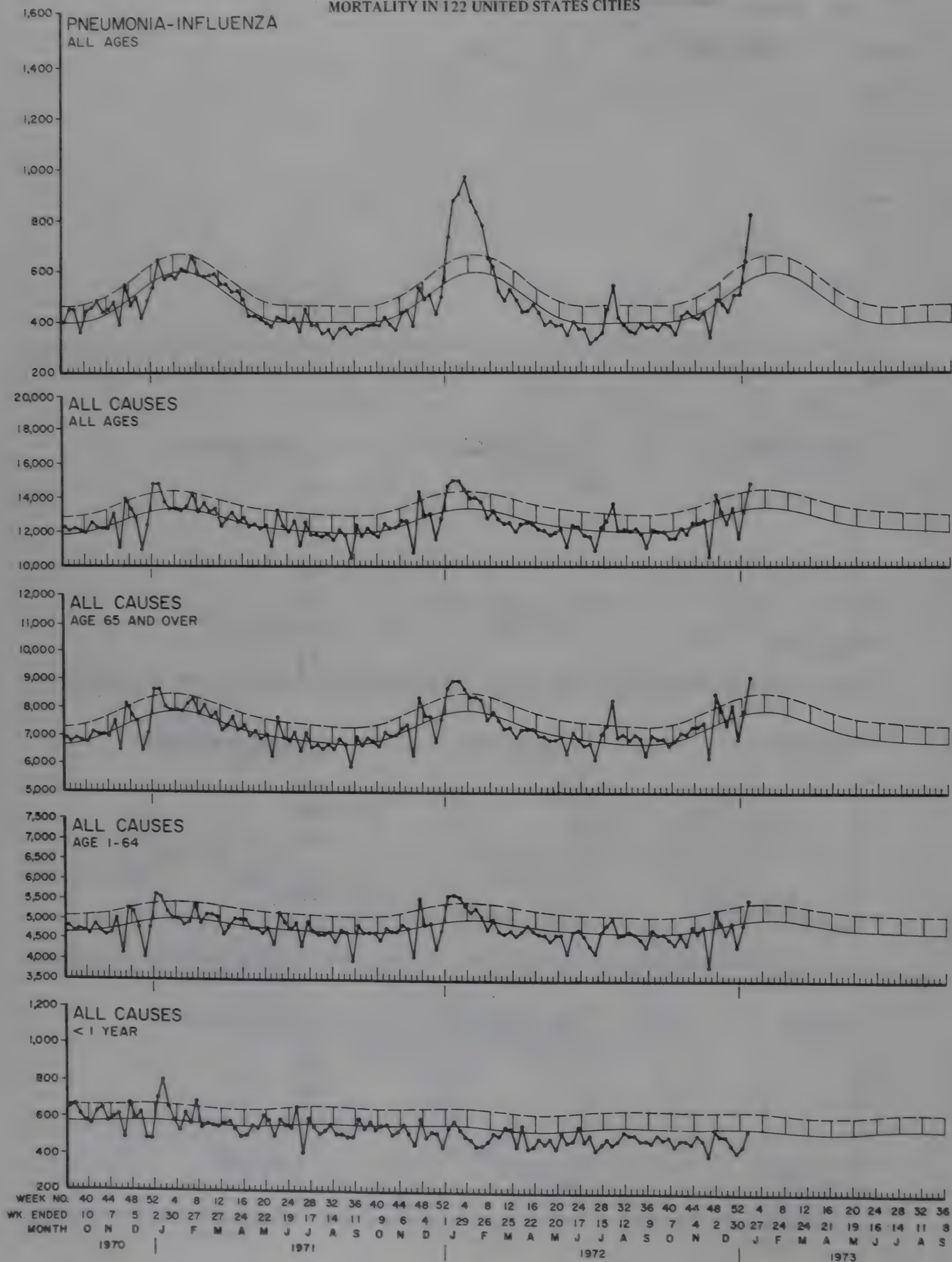


Figure 3  
MORTALITY IN 122 UNITED STATES CITIES



## EPIDEMIOLOGIC NOTES AND REPORTS

## BAT RABIES — Virginia, Delaware

**Outbreak 1:** On Aug. 2, 1972, a family living in Charlottesville, Virginia, found a dying bat in their back yard and suspecting possible rabies presented it to the Albemarle-Nelson-Charlottesville Department of Health for examination. The next day, the State Department of Health Laboratory reported that the bat had died of rabies. This was the first reported case of rabies in the area since 1966.

The county health department subsequently issued news releases encouraging citizens to report "fallen" bats or unusual bat activity and emphasizing the potential danger of these bats to children, household pets, and adult handlers. Over the next 8 weeks, 114 "fallen" bats were submitted to the health department for laboratory examination, and of 99 brains examined, 10 were positive for rabies, representing an infection rate of 10%. One of the rabid bats was reported to have had contact with a child, and 4 with cats. The child received post-exposure prophylaxis without incident, 2 of the cats were euthanized, and 2 were quarantined by their owners.

Investigation revealed that several bat colonies had been nesting in an old apartment building that was torn down in late July. When the apartments were demolished, the lost bats sought new roosts and were observed flying down chimneys and hanging on screens and trees. With the onset of cold weather in late October, no further cases have been reported.

(Reported by George Moore, M.D., Director, Albemarle-Nelson-Charlottesville Department of Health; and Karl A. Western, State Epidemiologist, Virginia State Department of Health.)

**Outbreak 2:** In the fall of 1972, rabies was confirmed in 2 bats submitted from Kent County, Delaware. One of the bats had bitten a 12-year-old boy, who was given post-exposure prophylaxis. Subsequently, 3 individuals from the Seaford area in Sussex County, 20 to 30 miles south of the area where the first bats were found, reported being attacked and bitten by bats that were not captured.

A series of vaccination clinics, conducted by the Society for Prevention of Cruelty to Animals, state and federal officials, and local citizens was held in Kent County, and further clinics were held in Sussex County. News releases were prepared to warn residents of the potential danger and to encourage reporting of bat sightings to Seaford officials. Supplies of DDT were donated by a local pest control operator, and special permission to use the chemical for bat control was obtained from the U.S. Environmental Protection Agency.

In the period October 24 through November 6, a number of bats were captured in the Seaford area, and 12 colony sites were dusted with DDT. One colony of 17 big brown bats, *Eptesicus fuscus*, was captured, and all the bats were tested for rabies. Three of the 17 were infected. A total of 6 rabies cases, all in big brown bats, were reported from Sussex County in late October and early November, but since that time, no further cases in bats or in other animals have been recorded.

(Reported by Maynard H. Mires, M.D., Chief, Delaware Bureau of Disease Control, Delaware Department of Health and Social Services, Division of Public Health.)

## Editorial Note

The infection rates in examined bats from the Charlottesville and Seaford areas were high, indicating an epizootic in both locations. With the recognition of the rabies outbreaks in bats, these health departments responded actively and appropriately in alerting the public to the potential danger.

In 1972, more bat cases from the United States have been reported through October than for any other year, but there is no evidence that rabies in bats has resulted in increased incidence or introduction of disease to terrestrial mammals in areas that have been otherwise free of rabies.

Bats are a biologically unique and increasingly rare group of animals, and campaigns involving their destruction should be limited to specific districts where bat rabies is epizootic or to specific colonies that are located where they pose a significant health hazard.

## FOODBORNE SALMONELLA NEWPORT OUTBREAK — Texas

On Nov. 4, 1972, a pregame barbecue was held at the Ex-Students' Center of a college in Austin, Texas, for alumni attending the afternoon football game. Approximately 450 persons were served. The next day, the Center began to receive reports of illness among those who had eaten at the barbecue, many of whom had returned to their homes in other parts of Texas. Investigation revealed that 191 of 237 persons contacted had been ill.

The illness was characterized by diarrhea (95%), cramps (82%), fever (83%), nausea (54%), and vomiting (55%), with many people also complaining of headache and myalgia. Ninety-seven percent of the ill persons questioned reported an incubation period of 6 to 30 hours, often with sudden onset of diarrhea. Most people were ill for 3 to 7 days, and at least 14 were hospitalized. No fatalities were reported. Stool cultures from 72 patients were positive for *Salmonella newport*. One patient had a double infection with *S. newport* and *S. derby*, and 2 had *S. derby* as the sole isolate.

Food items served at the barbecue were barbecued brisket, barbecue sauce, cole slaw, potato salad, beans, bread, cake, iced tea, and coffee. Differential food-specific attack

rates implicated the beans ( $p < 0.01$ ) and the brisket ( $p = 0.02$ ) as probable vehicles of infection. Samples of the beans and barbecue remaining from the meal were cultured and grew *S. newport*. In addition, *S. derby* was grown from the beans.

The 50 pounds of beans had been boiled for 2 1/2 hours, allowed to cool, transferred to a large storage pot by a hand scoop, and refrigerated. The next morning, they were taken to the Ex-Students' Center, warmed, and served. The kitchen worker who prepared the beans denied illness but had a positive stool culture for *S. newport*. A culture of beans that had not been cooked revealed no salmonella. The meat had been received as a 350-pound shipment in October and had been frozen immediately. Half of it had been used for a meal on October 21 with no reports of subsequent illness. The remaining half was thawed, smoked, and baked 2 days before the barbecue. It was then refrigerated until the morning of the barbecue, when it was sliced, taken to the Center, heated, and served. The exact cooking temperature achieved was not known, but the worker who prepared the meat reported that a portion still seemed to be frozen after smoking. There was no history of cross-contamination be-

**SALMONELLA NEWPORT — Continued**

tween the beans and the meat during preparation, handling, or serving.

(Reported by John B. Sessums, Jr., M.D., Director, Austin-Travis County Health Department; Kay Bateman, R.N., and E. Lowell Berry, M.D., Director, Dallas Health Department, Alton Rogers, Sanitarian, and Albert G. Randall, M.D., Director, Houston Health Department; Val Viers, R.N., and M. S. Dickerson, M.D., State Epidemiologist, Texas State Department of Health; and two EIS Officers.)

**Editorial Note**

The method of contamination of the beans and brisket

is not clear. The possibility that the food handler with the positive culture was an asymptomatic carrier who contaminated these foods appears unlikely. He had no contact with the beef, and his stool culture did not grow *S. derby*, which was present in the beans. It is possible that salmonella survived in undercooked portions of the beef and that there was subsequent cross-contamination to the beans, but attempts to document this route of spread were unsuccessful.

The apparently high attack rate (81%) must be interpreted cautiously; no list of those attending the barbecue was available, and most of the people contacted were identified because they had called in to report illness.

**POSSIBLE SCOMBROID FISH POISONING — California**

On Sept. 3, 1972, a family of 4 became ill with generalized flushing, pruritus, headache, nausea, vomiting, and diarrhea 2 hours after eating commercially smoked albacore. No other food was eaten that day. The father, who had eaten the largest portion, was hospitalized with shock. He improved rapidly with intravenous fluids and antihistamines and was discharged 2 days later with a diagnosis of "fish allergy". The other family members recovered within 3 to 5 hours.

No fish remained for chemical analysis, and due to the large number of suppliers to the fish market, it was not possible to trace the fish or determine its prior handling, except that it had been purchased fresh by the market and was frozen until it was smoked on the premises.

(Reported by Robert Murray, Epidemiologist, Ichiro Kamei, M.D., Chief, Division of Acute Communicable Diseases, and Gerald A. Heidbreder, M.D., Deputy Director, Los Angeles County Department of Health Services; James Chin, M.D., State Epidemiologist, California State Department of Public Health; and an EIS Officer.)

**Editorial Note**

Between 1968 and 1971, 7 outbreaks of scombroid fish poisoning were reported for the entire United States, and in

California, 10 episodes have been reported since 1927. Undoubtedly, many cases go both undiagnosed and unreported. "Fish allergies" may be diagnosed in some of these cases, while in many mild cases of short duration, medical consultation may not be sought.

The types of fish causing scombroid poisoning (also called scombrotoxicosis or saurine poisoning) are perciform fish of the suborder *Scombroidei* (tuna, bonito, skipjack, mackerel, and albacore). Fish become toxic when there is an overgrowth of certain bacteria under conditions of improper refrigeration. Bacteria which can be involved include *Proteus morgani*, *Salmonella*, *Shigella*, *Clostridium*, *Escherichia*, and *Vibrios*. These bacteria degrade histidine into histamine and saurine, which are believed to be etiologic agents of the syndrome. Whenever scombroid fish poisoning is suspected and the incriminated fish is available, its flesh should be analyzed for histamine and cultured for bacteria. A concentration of histamine exceeding 100 mg per 100 gm of fish muscle will usually result in clinical illness (1).

**Reference**

1. Halstead BW, Courville DA: Poisonous and Venomous Marine Animals of the World. Washington, U.S. Government Printing Office, 1967, p. 653

**POSSIBLE BACILLUS CEREUS INFECTION — Wisconsin**

On Aug. 24, 1972, a woman from Milwaukee, Wisconsin, became ill with nausea and diarrhea approximately 14 hours after eating a commercially prepared chicken pot pie and was treated at a local first aid station. Her husband also ate a pie but did not become ill.

Investigation revealed that the refrigerated pies had been purchased from the delicatessen division of a local department store. None of the suspect pie remained for examination, but tests on 1 of 3 pies purchased at the same time showed mold on the surface of the pie crust and  $2.7 \times 10^6$ /gm of *Bacillus cereus*.

(Reported by M. S. Bergdoll, Ph.D., Professor, Food Research Institute, University of Wisconsin; Paul J. Pace, Chief Bacteriologist, and E. R. Krumbiegel, M.D., Commissioner of Health, Milwaukee Health Department; H. Grant Skinner, M.D., State Epidemiologist, Wisconsin Department of Health and Social Services.)

**Editorial Note**

The reported symptoms and incubation period in this outbreak are consistent with foodborne illness caused by *B. cereus*, an aerobic spore-forming organism. Laboratory analysis revealed *B. cereus* in a concentration within the range reported in previous *B. cereus* outbreaks. Although *B. cereus* is a common cause of foodborne disease in Europe, only a few foodborne outbreaks caused by this organism have been well documented in the United States. This organism should be considered in the differential diagnosis of outbreaks associated with diarrhea and cramps, with little or no vomiting or fever. Most commonly implicated foods include meat or meat products and cream or pudding preparations. Recent studies suggest that an enterotoxin may be responsible for clinical illness (1).

**Reference**

1. Goepfert JM, Spira WM, Kim HA: *Bacillus cereus*: Food poisoning organism. A review. Journal of Milk and Food Technology 35:213-223, 1972

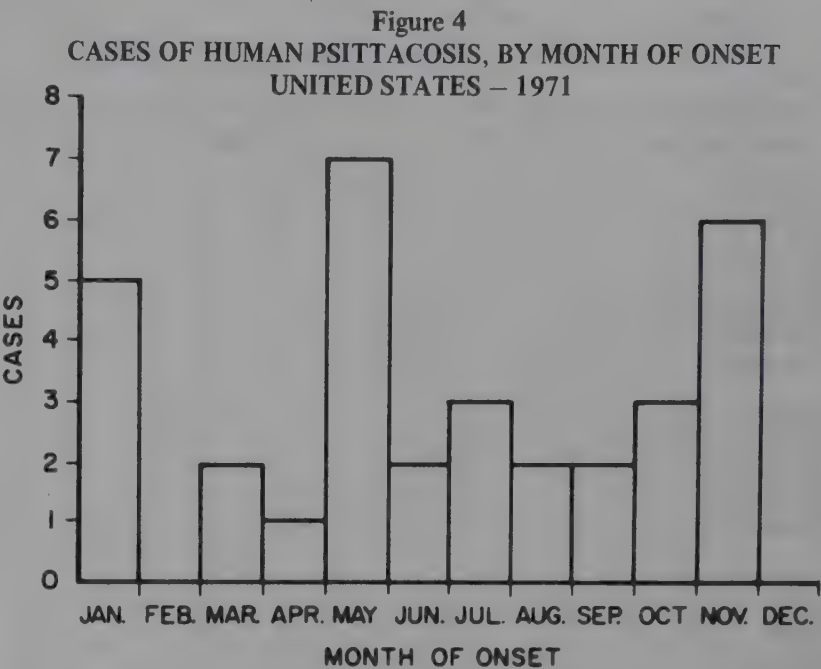
SURVEILLANCE SUMMARY  
HUMAN PSITTACOSIS – United States, 1971

Fourteen states reported a total of 33 human cases of psittacosis with onsets in 1971. In addition, 4 human cases with onsets in 1970 were reported in 1971, increasing the 1970 case total from 36 to 40.

New York and New York City reported the largest number of cases (7) in 1971, followed by California with 6 cases. These 2 areas taken together accounted for 39% of the total cases. Of all states reporting cases in 1971, 8 reported an increase over 1970, 3 recorded a decrease, and 3 reported the same number of cases. Five states that reported cases in 1971 had recorded no cases the previous year. In addition, 17 states have not reported any cases since 1967, and 9 states have not recorded any cases in the past 10 years.

Of the 29 cases on which date of onset was known, more cases occurred in May (7 cases) and November (6 cases) than in other months (Figure 4). Of the 33 cases reported, 31 were adults, 1 was age 5, and 1 was 13. Twenty-one cases (63.6%) occurred in males and 12 cases in females.

Pigeons were the most probable source of infection in 9 cases, parrots in 6, parakeets in 4, canaries in 2, chickens in 1, and turkeys in 1.



(Reported by the Office of Veterinary Public Health Services, Epidemiology Program, CDC.)

SUMMARY OF REPORTED CASES OF INFECTIOUS SYPHILIS

CASES OF PRIMARY AND SECONDARY SYPHILIS: BY REPORTING AREAS – DECEMBER 1972 AND DECEMBER 1971 – PROVISIONAL DATA

Reporting Area	December		Cumulative Jan. – Dec.		Reporting Area	December		Cumulative Jan. – Dec.	
	1972	1971	1972	1971		1972	1971	1972	1971
NEW ENGLAND	93	68	898	625	EAST SOUTH CENTRAL	130	104	1,567	1,275
Maine	2	1	28	14	Kentucky	43	28	398	331
New Hampshire	2	—	10	5	Tennessee	36	16	544	367
Vermont	5	—	19	5	Alabama	12	20	216	175
Massachusetts	51	45	520	321	Mississippi	39	40	309	402
Rhode Island	4	5	46	40	WEST SOUTH CENTRAL	206	252	2,941	3,559
Connecticut	29	17	275	240	Arkansas	7	24	174	247
MIDDLE ATLANTIC	508	432	6,034	5,737	Louisiana	49	69	859	750
Upstate New York	42	26	434	456	Oklahoma	3	10	107	105
New York City	315	308	4,107	3,933	Texas	147	149	1,801	2,457
Pa. (Excl. Phila.)	19	21	194	168	MOUNTAIN	47	53	528	590
Philadelphia	45	20	354	231	Montana	—	—	7	1
New Jersey	87	57	945	949	Idaho	—	—	8	12
EAST NORTH CENTRAL	165	222	2,558	2,709	Wyoming	3	—	14	3
Ohio	31	34	316	461	Colorado	17	12	98	73
Indiana	15	18	265	330	New Mexico	6	13	104	159
Downstate Illinois	11	14	138	149	Arizona	17	16	197	211
Chicago	48	80	1,016	859	Utah	1	1	20	17
Michigan	57	74	759	850	Nevada	3	11	80	114
Wisconsin	3	2	64	60	PACIFIC	318	360	3,612	3,398
WEST NORTH CENTRAL	22	22	288	409	Washington	11	10	127	142
Minnesota	10	6	65	70	Oregon	4	1	41	14
Iowa	4	—	52	23	California	301	347	3,404	3,202
Missouri	4	12	108	231	Alaska	1	—	14	22
North Dakota	—	1	2	6	Hawaii	1	2	26	18
South Dakota	—	—	2	9	U.S. TOTAL	2,024	2,017	24,932	24,109
Nebraska	2	2	19	24	TERRITORIES	87	62	891	850
Kansas	2	1	40	46	Puerto Rico	82	61	799	820
SOUTH ATLANTIC	535	504	6,506	5,807	Virgin Islands	5	1	92	30
Delaware	4	2	59	36	Note: Cumulative Totals include revised and delayed reports through previous months.				
Maryland	46	65	818	650					
District of Columbia	82	52	872	629					
Virginia	64	28	592	353					
West Virginia	1	1	33	32					
North Carolina	33	40	545	443					
South Carolina	44	60	506	404					
Georgia	100	122	1,404	1,585					
Florida	161	134	1,677	1,675					

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JANUARY 13, 1973 AND JANUARY 15, 1972 (2nd WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES	49	-	4,079	-	2	7	20	2	138	868	1,102
NEW ENGLAND	2	-	204	-	-	1	1	-	7	76	74
Maine *	-	-	27	-	-	-	-	-	-	8	9
New Hampshire *	-	-	22	-	-	-	-	-	-	12	4
Vermont	-	-	8	-	-	-	-	-	-	3	5
Massachusetts	2	-	-	-	-	1	1	-	-	36	25
Rhode Island	-	-	61	-	-	-	-	-	1	9	15
Connecticut	-	-	86	-	-	-	-	-	6	8	16
MIDDLE ATLANTIC	8	-	77	-	-	-	-	-	32	166	179
Upstate New York	-	-	3	-	-	-	-	-	1	30	46
New York City	2	-	73	-	-	-	-	-	10	34	31
New Jersey	4	-	NN	-	-	-	-	-	6	38	102
Pennsylvania	2	-	1	-	-	-	-	-	15	64	-
EAST NORTH CENTRAL	4	-	1,589	-	-	3	9	-	14	99	129
Ohio	3	-	125	-	-	-	9	-	8	29	33
Indiana	-	-	289	-	-	-	-	-	1	1	2
Illinois	-	-	-	-	-	-	-	-	-	9	27
Michigan	1	-	341	-	-	3	-	-	5	59	62
Wisconsin	-	-	834	-	-	-	-	-	-	1	5
WEST NORTH CENTRAL	-	-	721	-	2	-	3	-	3	29	58
Minnesota *	-	-	2	-	-	-	-	-	-	-	2
Iowa	-	-	647	-	-	-	-	-	-	7	7
Missouri	-	-	8	-	-	-	-	-	-	13	20
North Dakota	-	-	21	-	-	-	-	-	-	2	1
South Dakota	-	-	-	-	2	-	-	-	-	2	14
Nebraska	-	-	29	-	-	-	-	-	2	-	1
Kansas *	-	-	14	-	-	-	3	-	-	5	13
SOUTH ATLANTIC	6	-	586	-	-	1	1	-	7	123	170
Delaware	-	-	14	-	-	-	-	-	-	2	4
Maryland	-	-	18	-	-	1	-	-	-	16	36
District of Columbia	-	-	2	-	-	-	-	-	-	-	-
Virginia	-	-	90	-	-	-	-	-	1	16	15
West Virginia	-	-	436	-	-	-	-	-	-	7	31
North Carolina	1	-	NN	-	-	-	-	-	2	23	27
South Carolina*	-	-	26	-	-	-	1	-	1	3	14
Georgia *	-	-	-	-	-	-	-	-	-	-	12
Florida	5	-	-	-	-	-	-	-	3	56	31
EAST SOUTH CENTRAL	13	-	216	-	-	-	3	-	22	53	63
Kentucky	2	-	171	-	-	-	-	-	-	14	19
Tennessee	3	-	NN	-	-	-	1	-	-	27	36
Alabama	8	-	37	-	-	-	2	-	22	10	5
Mississippi	-	-	8	-	-	-	-	-	-	2	3
WEST SOUTH CENTRAL	2	-	177	-	-	-	1	-	7	85	112
Arkansas*	-	-	-	-	-	-	-	-	-	1	6
Louisiana *	2	-	NN	-	-	-	-	-	6	28	14
Oklahoma	-	-	3	-	-	-	-	-	1	5	20
Texas	-	-	174	-	-	-	1	-	-	51	72
MOUNTAIN	-	-	236	-	-	-	-	-	2	46	66
Montana	-	-	19	-	-	-	-	-	-	3	2
Idaho	-	-	-	-	-	-	-	-	-	6	10
Wyoming	-	-	91	-	-	-	-	-	-	1	-
Colorado	-	-	60	-	-	-	-	-	-	-	1
New Mexico	-	-	21	-	-	-	-	-	-	17	25
Arizona	-	-	40	-	-	-	-	-	1	16	17
Utah	-	-	4	-	-	-	-	-	1	3	4
Nevada	-	-	1	-	-	-	-	-	-	-	7
PACIFIC	14	-	273	-	-	2	2	2	44	191	251
Washington	5	-	223	-	-	-	-	-	-	15	13
Oregon	-	-	1	-	-	-	-	-	3	33	36
California	9	-	-	-	-	2	2	2	40	138	183
Alaska *	-	-	12	-	-	-	-	-	-	2	5
Hawaii	-	-	37	-	-	-	-	-	1	3	14
Guam	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	-	-	11	-	-	-	-	-	-	-	-
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: (1972) Minn. 3, La. 1

Chickenpox: (1972) Me. 44, N.H. 21, Minn. 138, Kans. 25, Ga. 19, (1973) S.C. 9

Encephalitis, primary: (1972) Minn. 1, La. 1

Hepatitis B: (1972) Kans. 2, Ark. 1, Alaska 6, (1973) S.C. 1

Hepatitis A: (1972) Me. 4, N.H. 1, Minn. 2, Kans. 6, Ga. 2, Ark. 6, La. 6,  
Alaska 15, (1973) S.C. 6

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JANUARY 13, 1973 AND JANUARY 15, 1972 (2nd WEEK) — Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	3	6	631	1,000	1,199	27	50	66	1,334	2,441	336	470
NEW ENGLAND .....	—	—	250	382	35	2	5	2	85	148	15	25
Maine .....	—	—	—	—	6	—	—	1	2	3	—	—
New Hampshire* .....	—	—	35	57	1	—	1	—	—	1	—	—
Vermont .....	—	—	—	—	—	—	—	—	31	51	—	1
Massachusetts .....	—	—	125	195	—	2	3	—	35	46	10	19
Rhode Island .....	—	—	1	4	23	—	—	1	3	5	—	—
Connecticut .....	—	—	89	126	5	—	1	—	14	42	5	5
MIDDLE ATLANTIC .....	1	2	53	107	132	4	8	3	145	274	16	34
Upstate New York .....	—	1	6	7	1	—	—	2	NN	NN	3	6
New York City .....	—	—	28	64	14	—	2	1	99	197	3	8
New Jersey .....	—	—	11	27	115	2	3	—	20	27	6	16
Pennsylvania .....	1	1	8	9	2	2	3	—	26	50	4	4
EAST NORTH CENTRAL .....	1	1	181	252	491	—	3	12	382	697	70	113
Ohio .....	—	—	5	6	15	—	3	6	22	107	6	11
Indiana .....	—	—	27	27	123	—	—	1	45	71	22	34
Illinois .....	—	—	75	112	180	—	—	3	131	159	9	13
Michigan .....	1	1	44	59	43	—	—	2	45	116	24	32
Wisconsin .....	—	—	30	48	130	—	—	—	139	244	9	23
WEST NORTH CENTRAL .....	—	—	23	28	21	1	1	4	14	45	123	129
Minnesota* .....	—	—	3	3	1	—	—	—	—	—	—	—
Iowa .....	—	—	20	25	16	1	1	—	—	13	9	12
Missouri .....	—	—	—	—	3	—	—	—	—	5	103	103
North Dakota .....	—	—	—	—	1	—	—	—	2	4	4	5
South Dakota .....	—	—	—	—	—	—	—	1	—	—	—	—
Nebraska .....	—	—	—	—	—	—	—	1	2	13	7	9
Kansas .....	—	—	—	—	—	—	—	2	10	10	—	—
SOUTH ATLANTIC .....	1	3	17	24	187	5	8	16	150	292	9	18
Delaware .....	—	—	—	—	—	—	—	1	13	25	—	—
Maryland .....	—	—	—	—	1	3	4	—	24	53	1	1
District of Columbia .....	—	—	—	—	—	—	—	—	2	2	1	1
Virginia .....	1	2	5	5	—	—	1	4	28	35	—	—
West Virginia .....	—	—	1	4	3	—	—	3	32	114	2	8
North Carolina .....	—	1	—	2	5	2	3	4	NN	NN	—	2
South Carolina* .....	—	—	1	2	11	—	—	2	2	5	—	—
Georgia* .....	—	—	1	1	19	—	—	—	—	—	—	—
Florida .....	—	—	9	10	148	—	—	2	49	58	5	6
EAST SOUTH CENTRAL .....	—	—	5	15	80	3	6	5	85	143	9	15
Kentucky .....	—	—	1	2	58	—	3	3	5	21	1	1
Tennessee .....	—	—	4	4	12	2	2	—	37	79	6	10
Alabama .....	—	—	—	—	10	1	1	2	35	35	—	2
Mississippi* .....	—	—	—	9	—	—	—	—	8	8	2	2
WEST SOUTH CENTRAL .....	—	—	12	42	47	1	4	5	83	213	17	31
Arkansas .....	—	—	—	—	1	—	—	—	2	3	5	5
Louisiana* .....	—	—	—	—	—	—	—	2	—	—	—	—
Oklahoma .....	—	—	—	1	1	—	—	—	—	6	—	1
Texas .....	—	—	12	41	45	1	4	3	81	204	12	25
MOUNTAIN .....	—	—	22	36	82	5	6	1	115	215	15	22
Montana .....	—	—	—	—	1	—	—	—	3	8	—	—
Idaho .....	—	—	1	2	—	—	—	—	1	3	2	4
Wyoming .....	—	—	—	—	—	—	—	1	97	53	—	—
Colorado .....	—	—	7	15	56	2	2	—	9	11	6	9
New Mexico .....	—	—	12	15	1	—	—	—	38	58	4	5
Arizona .....	—	—	2	4	24	—	1	—	26	81	3	3
Utah .....	—	—	—	—	—	1	1	—	1	1	—	—
Nevada .....	—	—	—	—	—	2	2	—	—	—	—	1
PACIFIC .....	—	—	68	114	124	6	9	18	275	414	62	83
Washington .....	—	—	51	77	26	1	1	—	36	46	12	18
Oregon .....	—	—	7	15	3	2	2	—	53	113	16	18
California .....	—	—	10	20	93	3	6	18	164	220	34	47
Alaska .....	—	—	—	—	—	—	—	—	19	31	—	—
Hawaii .....	—	—	—	2	2	—	—	—	3	4	—	—
Guam .....	—	—	—	—	—	—	—	—	—	—	—	—
Puerto Rico .....	—	—	55	75	—	—	—	—	18	21	1	3
Virgin Islands .....	—	—	—	—	—	—	—	—	—	—	—	—

\*Delayed reports: Measles: (1972) N.H. 33, Minn. 1, Ga. 17, Miss. 47, La. 2, (1973) S.C. 1

Mumps: (1972) Me. 4, N.H. 1, Minn. 10, Kans. 20, Ga. 3, Ark. 3, (1973) S.C. 3

Rubella: (1972) Ga. 15, Ark. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JANUARY 13, 1973 AND JANUARY 15, 1972 (2nd WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
									GONOR- RHEA	SYPHILIS (Pri. & Sec.)		
		Cumulative 1973	1973		Cum 1973	Cumulative 1973	1973	Cum 1973	1973	Cum 1973	1973	1973
UNITED STATES	-	447	809	4	1	6	1	1	14,374	571	49	79
NEW ENGLAND	-	2	15	-	-	-	-	-	194	5	2	3
Maine *	-	-	-	-	-	-	-	-	29	1	2	3
New Hampshire *	-	-	-	-	-	-	-	-	11	1	-	-
Vermont *	-	-	-	-	-	-	-	-	-	1	-	-
Massachusetts	-	-	11	-	-	-	-	-	-	-	-	-
Rhode Island *	-	2	3	-	-	-	-	-	29	-	-	-
Connecticut	-	-	1	-	-	-	-	-	125	2	-	-
MIDDLE ATLANTIC	-	44	130	-	-	3	1	1	1,734	114	2	2
Upstate New York *	-	11	37	-	-	-	-	-	486	8	-	-
New York City	-	-	44	-	-	3	-	-	613	62	-	-
New Jersey	-	17	33	-	-	-	-	-	272	21	-	-
Pennsylvania	-	16	16	-	-	-	1	1	363	23	2	2
EAST NORTH CENTRAL	-	73	134	-	-	1	-	-	1,775	19	-	8
Ohio	-	11	61	-	-	-	-	-	635	2	-	-
Indiana	-	6	8	-	-	-	-	-	177	7	-	1
Illinois	-	31	31	-	-	-	-	-	264	3	-	1
Michigan *	-	-	-	-	-	1	-	-	575	7	-	-
Wisconsin	-	25	34	-	-	-	-	-	124	-	-	6
WEST NORTH CENTRAL	-	9	16	1	-	-	-	-	837	4	22	33
Minnesota *	-	1	1	-	-	-	-	-	261	3	3	4
Iowa	-	3	8	-	-	-	-	-	51	-	11	16
Missouri	-	4	4	1	-	-	-	-	400	-	2	3
North Dakota *	-	-	-	-	-	-	-	-	10	-	6	7
South Dakota	-	-	1	-	-	-	-	-	46	-	-	3
Nebraska	-	-	1	-	-	-	-	-	69	1	-	-
Kansas *	-	1	1	-	-	-	-	-	-	-	-	-
SOUTH ATLANTIC	-	115	187	-	-	1	-	-	4,573	241	6	9
Delaware *	-	-	2	-	-	-	-	-	36	-	-	-
Maryland	-	13	19	-	-	-	-	-	330	57	-	-
District of Columbia	-	3	13	-	-	-	-	-	332	11	-	-
Virginia	-	23	29	-	-	-	-	-	427	65	4	5
West Virginia	-	4	6	-	-	-	-	-	64	1	-	2
North Carolina	-	8	24	-	-	-	-	-	460	5	-	-
South Carolina *	-	40	40	-	-	-	-	-	638	10	-	-
Georgia	-	13	28	-	-	-	-	-	1,070	55	1	1
Florida	-	11	26	-	-	1	-	-	1,216	37	1	1
EAST SOUTH CENTRAL	-	34	65	1	-	-	-	-	1,149	55	11	14
Kentucky *	-	11	15	1	-	-	-	-	135	29	4	5
Tennessee	-	12	20	-	-	-	-	-	479	9	7	9
Alabama *	-	9	26	-	-	-	-	-	201	3	-	-
Mississippi	-	2	4	-	-	-	-	-	334	14	-	-
WEST SOUTH CENTRAL	-	64	70	2	-	-	-	-	1,095	47	2	4
Arkansas *	-	7	11	-	-	-	-	-	152	7	1	1
Louisiana *	-	11	11	-	-	-	-	-	319	16	-	-
Oklahoma	-	6	8	2	-	-	-	-	131	3	1	3
Texas	-	40	40	-	-	-	-	-	493	21	-	-
MOUNTAIN	-	23	47	-	-	-	-	-	530	25	1	1
Montana *	-	-	-	-	-	-	-	-	40	-	-	-
Idaho	-	-	-	-	-	-	-	-	38	1	-	-
Wyoming	-	2	2	-	-	-	-	-	-	-	-	-
Colorado	-	-	-	-	-	-	-	-	126	3	-	-
New Mexico	-	-	6	-	-	-	-	-	111	7	-	-
Arizona *	-	19	37	-	-	-	-	-	131	13	1	1
Utah	-	-	-	-	-	-	-	-	27	-	-	-
Nevada	-	2	2	-	-	-	-	-	57	1	-	-
PACIFIC	-	83	145	-	1	1	-	-	2,487	61	3	5
Washington	-	6	11	-	-	-	-	-	214	-	-	-
Oregon *	-	-	-	-	-	-	-	-	200	-	-	-
California	-	71	126	-	1	1	-	-	1,937	52	3	5
Alaska *	-	-	-	-	-	-	-	-	51	8	-	-
Hawaii	-	6	8	-	-	-	-	-	85	1	-	-
Guam	-	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	-	9	10	-	-	-	-	-	-	-	-	-
Virgin Islands	-	-	-	-	-	-	-	-	75	10	1	2
									2	-	-	-

\*Delayed reports: Tularemia: (1972) Ark. 1

Typhoid fever: (1972) Ore. 1

TB (1972) Me. 5, N.H. delete 1, R.I. 2, Mich. 15, Minn. 4, N. Dak. 2,

Kans. 3, Ky. delete 6, La. 9, Mont. 1, Alaska 3

Gonorrhea: (1972) Me. 19, Minn. 83, La. 22, (1973) S.C. 332

Syphilis: (1972) Vt. 1, N.Y. Ups. 16, Del. 3, La. delete 1, (1973) S.C. 12

Rabies in animals: (1972) Minn. 5, Kans. 3, Ala. 8, La. 1, Ariz. 2

## Morbidity and Mortality Weekly Report

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TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING JANUARY 13, 1973

Week No.

2

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NORTH ATLANTIC	1,429	768	42	81	SOUTH ATLANTIC	1,429	768	42	81
Boston, Mass.	284	175	16	31	Atlanta, Ga.	133	72	4	7
Bridgeport, Conn.	68	42	1	7	Baltimore, Md.	168	89	6	3
Cambridge, Mass.	18	13	—	3	Charlotte, N. C.	79	30	6	—
Fall River, Mass.	32	20	1	—	Jacksonville, Fla.	114	62	5	5
Hartford, Conn.	66	43	3	—	Miami, Fla.	133	77	3	5
Lowell, Mass.	29	19	1	—	Norfolk, Va.	91	45	4	13
Lynn, Mass.	31	23	—	2	Richmond, Va.	118	72	3	16
New Bedford, Mass.	30	25	—	3	Savannah, Ga.	58	28	—	5
New Haven, Conn.	61	43	3	1	St. Petersburg, Fla.	116	93	—	5
Providence, R. I.	73	54	2	3	Tampa, Fla.	88	45	4	11
Somerville, Mass.	18	14	—	4	Washington, D. C.	276	126	7	16
Springfield, Mass.	54	34	2	7	Wilmington, Del.	55	29	—	1
Waterbury, Conn.	53	34	2	—					
Worcester, Mass.	66	46	—	2					
MIDDLE ATLANTIC	3,418	2,092	114	224	EAST SOUTH CENTRAL	795	436	33	47
Albany, N. Y.	41	28	3	2	Birmingham, Ala.	174	93	6	4
Allentown, Pa.	35	25	—	4	Chattanooga, Tenn.	58	31	1	—
Buffalo, N. Y.	166	100	8	24	Knoxville, Tenn.	37	24	1	—
Camden, N. J.	70	41	5	6	Louisville, Ky.	181	97	14	15
Elizabeth, N. J.	27	19	—	1	Memphis, Tenn.	101	54	2	6
Erie, Pa.	43	30	3	3	Mobile, Ala.	45	25	—	1
Jersey City, N. J.	75	48	8	7	Montgomery, Ala.	73	39	3	9
Newark, N. J.	84	46	6	13	Nashville, Tenn.	126	73	6	8
New York City, N. Y.†	1,703	1,032	48	102					
Paterson, N. J.	49	26	—	1	WEST SOUTH CENTRAL	1,670	902	67	90
Philadelphia, Pa.	411	248	10	5	Austin, Tex.	51	33	1	9
Pittsburgh, Pa.	256	140	11	25	Baton Rouge, La.	81	36	3	7
Reading, Pa.	54	39	2	4	Corpus Christi, Tex.	42	26	4	2
Rochester, N. Y.	131	86	4	11	Dallas, Tex.	206	106	8	—
Schenectady, N. Y.	21	14	—	2	El Paso, Tex.	77	38	6	15
Scranton, Pa.	51	33	2	3	Fort Worth, Tex.	83	50	3	6
Syracuse, N. Y.	92	63	2	1	Houston, Tex.	391	194	11	12
Trenton, N. J.	50	29	2	6	Little Rock, Ark.	74	39	4	4
Utica, N. Y.	27	21	—	2	New Orleans, La.	186	104	2	7
Yonkers, N. Y.	32	24	—	2	Oklahoma City, Okla.*	117	68	5	4
					San Antonio, Tex.	181	93	13	9
					Shreveport, La.	90	52	5	9
					Tulsa, Okla.	91	63	2	6
EAST NORTH CENTRAL	3,096	1,792	137	110					
Akron, Ohio	69	39	3	—	MOUNTAIN	680	413	34	48
Canton, Ohio	37	23	1	2	Albuquerque, N. Mex.	74	44	1	16
Chicago, Ill.	893	501	43	45	Colorado Springs, Colo.	27	19	—	4
Cincinnati, Ohio	175	106	5	6	Denver, Colo.	185	97	21	11
Cleveland, Ohio	226	134	14	5	Las Vegas, Nev.	27	13	—	2
Columbus, Ohio	183	88	12	5	Ogden, Utah	21	12	2	—
Dayton, Ohio	153	90	4	4	Phoenix, Ariz.	131	86	1	1
Detroit, Mich.	413	208	23	13	Pueblo, Colo.	32	25	—	2
Evansville, Ind.	47	30	1	4	Salt Lake City, Utah	74	50	6	3
Fort Wayne, Ind.	45	30	1	3	Tucson, Ariz.	109	67	3	9
Gary, Ind.	24	14	1	—					
Grand Rapids, Mich.	60	33	3	5	PACIFIC	2,319	1,539	59	127
Indianapolis, Ind.	176	104	8	2	Berkeley, Calif.	17	14	—	—
Madison, Wis.	52	25	3	4	Fresno, Calif.	75	55	1	7
Milwaukee, Wis.	163	110	1	2	Glendale, Calif.	50	40	—	3
Peoria, Ill.	72	42	4	—	Honolulu, Hawaii	59	38	4	6
Rockford, Ill.	51	30	1	5	Long Beach, Calif.	145	93	4	3
South Bend, Ind.	43	27	3	4	Los Angeles, Calif.	772	511	18	23
Toledo, Ohio	147	108	3	1	Oakland, Calif.	124	75	2	4
Youngstown, Ohio	67	50	3	—	Pasadena, Calif.	40	34	1	2
					Portland, Oreg.	185	115	8	—
WEST NORTH CENTRAL	994	658	28	35	Sacramento, Calif.	86	64	4	5
Des Moines, Iowa	99	66	4	3	San Diego, Calif.	186	111	4	5
Duluth, Minn.	32	21	—	4	San Francisco, Calif.	264	178	6	28
Kansas City, Kans.	3	—	1	—	San Jose, Calif.	57	39	2	13
Kansas City, Mo.	137	99	1	4	Seattle, Wash.	150	90	3	9
Lincoln, Nebr.	48	35	—	—	Spokane, Wash.	61	48	2	11
Minneapolis, Minn.	128	86	5	7	Tacoma, Wash.	48	34	—	8
Omaha, Nebr.	125	82	2	—					
St. Louis, Mo.	250	149	11	6	Total	15,284	9,185	545	823
St. Paul, Minn.	107	79	1	2	Expected Number	11,572	7,980	567	568
Wichita, Kans.	65	41	3	9	Cumulative Total (includes reported corrections for previous weeks)	28,563	17,173	1,007	1,464

Delayed report for week ending Jan. 6, 1973

\* Estimate based on average percent of divisional total

INTERNATIONAL NOTES  
QUARANTINE MEASURES

The following changes should be made in the "Supplement - United States Designated Yellow Fever Vaccination Centers," MMWR, Vol. 21, No. 20:

## COLORADO

## Denver

Department of Health and Hospitals  
Change address, telephone number, and  
clinic hours to:  
845 Bannock Street  
303, 893-6171  
Tues. and Thurs. 10-11 a.m.

## NEW YORK

## White Plains

Westchester County Department of  
Health  
148 Martine Avenue 10601  
914, 949-1300  
Clinic hours: Fri., 2 p.m.  
(NEW CENTER)

## OHIO

## Findlay

Marathon Oil Co. 45840  
Change area code to 419

## PENNSYLVANIA

## Pittsburgh

U.S. Public Health Service Outpatient  
Clinic 15219  
Change clinic hours to: Thursday 1:30-  
2:30 p.m.  
(Effective 2/1/73)

## Erratum, Vol. 22, No. 1, p. 8

In the article "*Clostridium perfringens* Gastroenteritis - Washington," correct the 2nd sentence, 2nd paragraph of the Editorial Note to read: "... 2) demonstration of larger numbers (greater than  $10^6$  per gm) of organisms in the implicated food and/or in the stools of affected individuals as compared with control subjects . . ."

The Morbidity and Mortality Weekly Report, circulation 39,500, is published by the Center for Disease Control, Atlanta, Ga.

Director, Center for Disease Control  
Director, Epidemiology Program, CDC  
Editor, MMWR

David A. Sencer, M.D.  
Philip S. Brachman, M.D.  
Michael B. Gregg, M.D.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to: Center for Disease Control  
Attn: Editor  
Morbidity and Mortality Weekly Report  
Atlanta, Georgia 30333

The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

DHEW Publication No. (HSM) 73-8017

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
PUBLIC HEALTH SERVICE

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CENTER FOR DISEASE CONTROL  
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EPIDEMIOLOGIC NOTES AND REPORTS

WATERBORNE *SHIGELLA SONNEI* INFECTION - Iowa

During November 1972, 208 cases of gastrointestinal illness occurred among 289 students and 25 staff members at a junior high school in Stockport, Iowa. Prominent symptoms included headache (77%), loose (76%) and frequent (61%) bowel movements, fever (72%), nausea (65%), abdominal cramps (61%), chills (48%), and vomiting (44%). Bloody stools and tenesmus were infrequent. A similar illness also affected 12 of 26 visiting basketball players from 2 high schools who had participated in a scrimmage at the junior high school gymnasium on November 15.

Epidemiologic investigation revealed that sporadic cases of illness occurred during the 1st week of November, but that the explosive phase of the outbreak began on November 10, when 18 students and the 1st staff member became ill (Figure 1). New cases continued to occur for 1 week until

CONTENTS

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Waterborne <i>Shigella sonnei</i> Infection - Iowa	21
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a 2nd and larger wave of the outbreak produced 73 cases on November 16 and 17. Rectal swab specimens from 108 students and 2 staff members were positive for *Shigella sonnei*.

Between November 7 and December 4, 99 apparently secondary cases of diarrhea occurred in household contacts of the students and faculty members at the school. *S. sonnei* infection was documented in a few patients who submitted stool specimens.

Further investigation revealed that gastrointestinal illness among students was significantly more frequent ( $p < 0.02$ )

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	3rd WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 3 WEEKS		
	January 20, 1973	January 22, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	70	41	41	142	125	106
Brucellosis	3	2	1	4	6	4
Chickenpox	5,141	3,155	---	12,015	8,435	---
Diphtheria	3	1	2	5	5	7
Encephalitis, primary:						
Arthropod-borne and unspecified	19	17	18	37	48	53
Encephalitis, post-infectious	4	7	7	7	12	16
Hepatitis, serum (Hepatitis B)	136	211	132	376	532	382
Hepatitis, infectious (Hepatitis A)	1,076	1,075	1,075	2,674	3,102	3,102
Malaria	—	11	36	6	152	143
Measles (rubeola)	605	714	714	1,599	1,913	1,913
Meningococcal infections, total	33	37	51	83	103	166
Civilian	32	36	49	77	99	157
Military	1	1	2	6	4	4
Mumps	2,441	2,087	2,528	4,912	6,014	6,764
Rubella (German measles)	403	526	526	873	1,147	1,347
Tetanus	1	—	2	1	—	2
Tuberculosis, new active	584	477	---	1,393	1,310	---
Tularemia	3	4	1	7	8	5
Typhoid fever	3	2	3	9	10	15
Typhus, tick-borne (Rky. Mt. spotted fever)	1	1	—	2	5	1
Venereal Diseases:						
Gonorrhea	15,835	12,113	---	41,054	36,975	---
Syphilis, primary and secondary	603	405	---	1,543	1,163	---
Rabies in animals	58	60	60	139	181	181

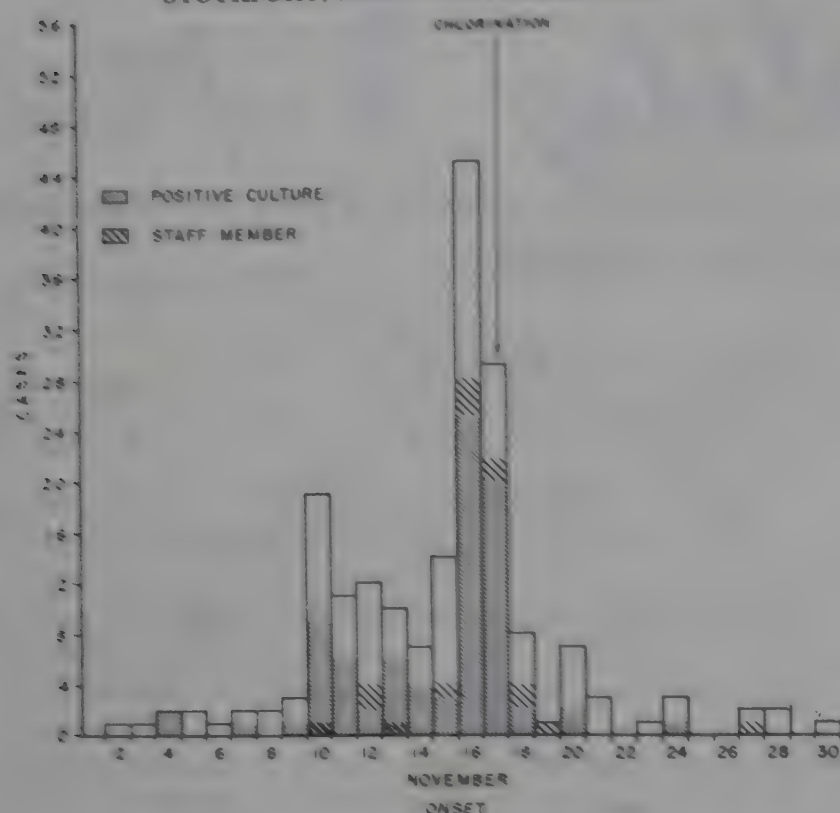
TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	—	Poliomyelitis, total:	—
Botulism:	—	Paralytic:	—
Congenital rubella syndrome:	1	Pertussis: Calif. - 1	1
Leprosy:	1	Rabies in man:	—
Leptospirosis: Calif. - 1	3	Trichinosis:	4
Plague:	—	Typhus, murine:	—

## SHIGELLA SONNEI – Continued

Figure 1

CASES OF GASTROINTESTINAL ILLNESS, BY DATE OF ONSET  
STOCKPORT, IOWA – NOVEMBER 1972



among those who customarily drank from the school water fountains than among those who did not. Furthermore, among the visiting high school basketball players, illness occurred only in those who had drunk water from the school fountain, and attack rates paralleled the amounts of water drunk (Table 1). A sample of the tap water in the school showed high levels of coliform contamination and yielded *S. sonnei*.

The school obtained its water from a shallow well in the school yard. After the onset of the outbreak, the school water system was chlorinated, and on November 21, the school was switched to the municipal water supply.

(Reported by Laurie Dorothy, R.N., Public Health Nurse, Van Buren County; Earl C. Voelker, Sr., Regional Sanitarian,

Table 1  
Attack Rates for Diarrhea, By High School and Amounts of Water Drunk  
Stockport, Iowa – November 1972

Estimated Amount of Water Drunk at Scrimmage	School A			School B		
	Number Ill	Total	Attack Rate (Per-cent)	Number Ill	Total	Attack Rate (Per-cent)
None	0	5	0	0	0	0
Small	2	7	29	0	3	0
Moderate–Large	5	6	83	5	5	100
Total	7	18	39	5	8	62

and Keith Bridson, Acting Director, Water Supply Division, Iowa State Department of Environmental Quality; Shirley Lindell, Ph.D., Microbiology Laboratory, and William Hausler, Ph.D., Chief, Iowa State Hygienic Laboratory; M. R. Kosuri, M.B.B.Ch., and Francis Carr, Public Health Representatives, and Arnold M. Reeve, M.D., Commissioner of Public Health and State Epidemiologist, Iowa State Department of Health; and 2 EIS Officers.)

## Editorial Note

Epidemiologic and laboratory evidence strongly incriminated the school's water supply as a source of shigella infection among students and staff. The system was substandard, with the well susceptible to contamination from surface and ground water. Shigellosis is usually spread from person to person, but it also accounted for 17% of the outbreaks of waterborne disease reported to CDC from 1961 to 1970 (1). Waterborne spread of shigellosis has been demonstrated epidemiologically in many instances, but isolation of the organism from contaminated water is unusual (2, 3).

## References

1. Taylor A Jr, Graun GF, et al: Outbreaks of waterborne diseases in the United States, 1961-1970. *JID* 125:329-331, 1972
2. Green CA, Macleod MC: Explosive epidemic of Sonne dysentery. *Br Med J* 2:259-261, 1943
3. Ross AI, Gillespie EH: An outbreak of waterborne gastroenteritis and Sonne dysentery. *Monthly Bulletin of the Great Britain Ministry of Health and the Public Health Laboratory Service* 11:36-46, 1952

## CURRENT TRENDS

### INFLUENZA – United States

Pneumonia and influenza mortality reported to CDC from 122 U.S. cities is above the epidemic threshold for the 3rd consecutive week (Figure 2). The Mountain, East South Central, Middle Atlantic, Pacific, West South Central, and South Atlantic areas have reported mortality above the epidemic threshold for at least 2 consecutive weeks, but mor-

tality is decreasing in the Mountain, Middle Atlantic, and West South Central areas. Furthermore, surveillance data suggests that influenza morbidity is decreasing in the Northeast but continuing in the Midwest and Far West.

(Reported by the Influenza Surveillance Unit, Viral Diseases Branch, Epidemiology Program, CDC.)

## EPIDEMIOLOGIC NOTES AND REPORTS

### BRILL-ZINSSER DISEASE – Virginia

On Aug. 27, 1972, a 55-year-old Russian-born hematology technician from Alexandria, Virginia, became ill with generalized weakness, drowsiness, anorexia, chills, and headache. She continued to work, but her condition worsened, and 2 days later, she had a temperature of 102°F. A complete blood cell count at this time was normal, and febrile

agglutinins for typhoid fever, brucellosis, and *Proteus* OX2 and OX19 were negative.

On August 30, the patient began a 5-day course of ampicillin and aspirin. Two days after starting therapy, a mild rash developed beneath both breasts, but the patient completed

(Continued on page 28)

Figure 2

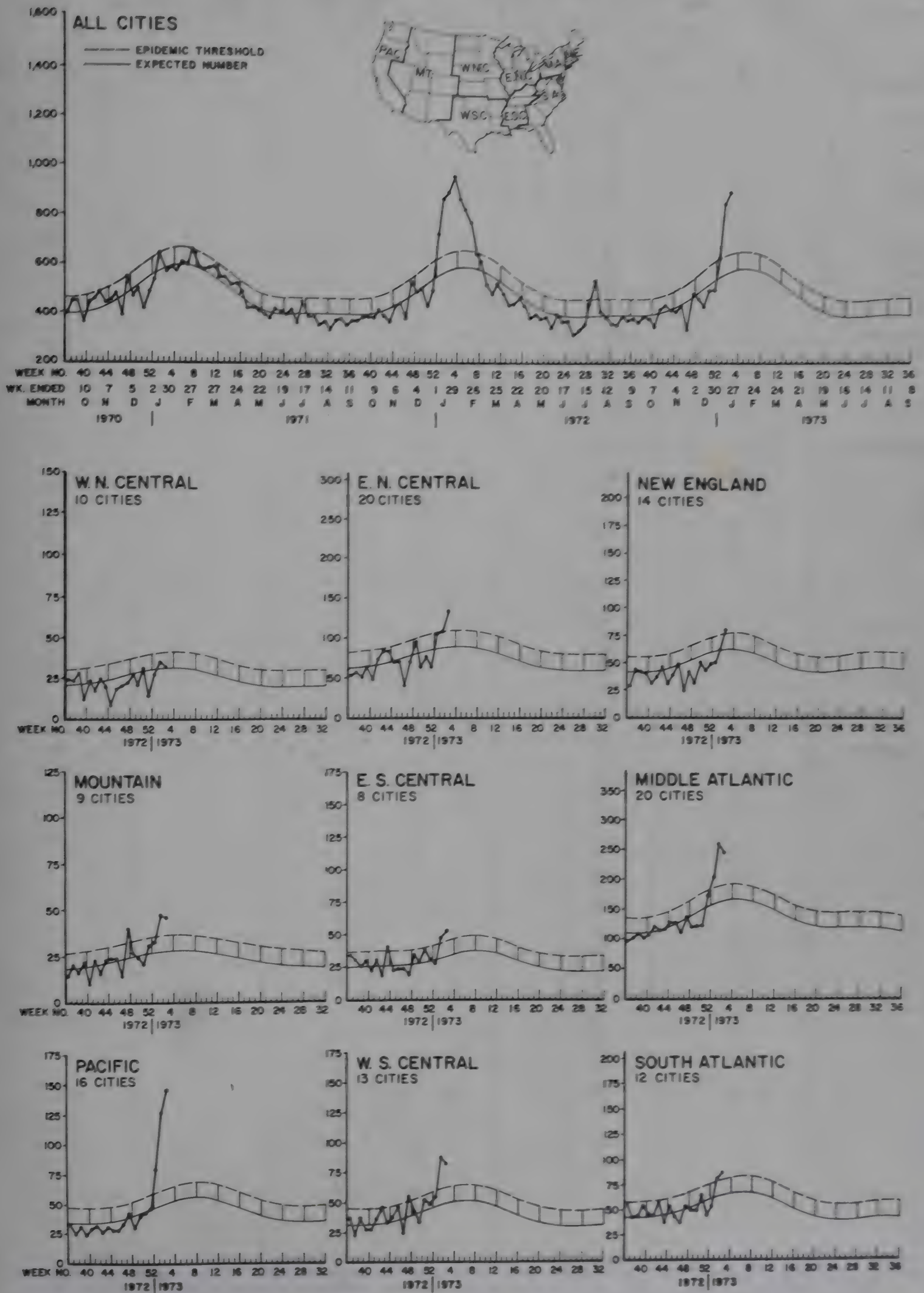


TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JANUARY 20, 1973 AND JANUARY 22, 1972 (3rd WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972			1973	1972
UNITED STATES .....	70	3	5,141	3	5	19	17	4	136	1,076	1,075
NEW ENGLAND .....	1	-	635	2	2	1	1	-	3	57	82
Maine *	-	-	28	-	-	-	-	-	-	4	11
New Hampshire .....	-	-	34	-	-	-	-	-	1	4	5
Vermont .....	-	-	4	-	-	-	-	-	-	2	7
Massachusetts .....	-	-	185	-	-	1	1	-	1	19	33
Rhode Island .....	-	-	102	2	2	-	-	-	-	11	6
Connecticut .....	1	-	282	-	-	-	-	-	1	17	20
MIDDLE ATLANTIC .....	5	2	89	-	-	2	2	-	52	182	150
Upstate New York .....	2	1	7	-	-	-	-	-	9	50	33
New York City .....	2	-	80	-	-	2	-	-	14	27	57
New Jersey *	1	-	NN	-	-	-	-	-	12	59	57
Pennsylvania .....	-	1	2	-	-	-	2	-	17	46	3
EAST NORTH CENTRAL .....	8	-	2,127	-	-	6	6	-	18	163	158
Ohio .....	-	-	85	-	-	-	-	-	1	26	23
Indiana *	-	-	266	-	-	-	-	-	-	5	6
Illinois .....	1	-	-	-	-	-	-	-	2	33	19
Michigan .....	7	-	892	-	-	5	6	-	12	92	103
Wisconsin .....	-	-	884	-	-	1	-	-	3	7	7
WEST NORTH CENTRAL .....	1	1	750	-	2	-	-	1	2	37	58
Minnesota *	-	-	6	-	-	-	-	-	1	3	6
Iowa .....	1	-	686	-	-	-	-	1	-	5	2
Missouri *	-	-	9	-	-	-	-	-	-	15	6
North Dakota .....	-	-	21	-	-	-	-	-	1	-	10
South Dakota .....	-	-	6	-	2	-	-	-	-	7	4
Nebraska .....	-	1	2	-	-	-	-	-	-	2	4
Kansas *	-	-	20	-	-	-	-	-	-	5	26
SOUTH ATLANTIC .....	24	-	479	-	-	2	1	-	13	164	164
Delaware .....	-	-	3	-	-	-	-	-	-	4	1
Maryland .....	3	-	21	-	-	-	-	-	1	6	26
District of Columbia .....	-	-	3	-	-	-	-	-	-	2	2
Virginia .....	6	-	41	-	-	1	1	-	5	28	22
West Virginia .....	-	-	387	-	-	-	-	-	-	13	10
North Carolina .....	3	-	NN	-	-	-	-	-	-	20	29
South Carolina .....	-	-	24	-	-	-	-	-	1	13	7
Georgia *	-	-	-	-	-	-	-	-	-	23	11
Florida .....	12	-	-	-	-	1	-	-	6	55	56
EAST SOUTH CENTRAL .....	3	-	233	-	-	1	3	-	6	67	75
Kentucky .....	2	-	159	-	-	-	-	-	1	24	34
Tennessee .....	1	-	NN	-	-	1	1	-	-	31	33
Alabama .....	-	-	30	-	-	-	2	-	3	10	5
Mississippi .....	-	-	44	-	-	-	-	-	2	2	3
WEST SOUTH CENTRAL .....	8	-	316	-	-	-	1	1	5	108	102
Arkansas *	-	-	6	-	-	-	-	-	-	4	7
Louisiana *	7	-	NN	-	-	-	-	1	3	22	9
Oklahoma *	-	-	6	-	-	-	1	-	2	5	36
Texas .....	1	-	304	-	-	-	-	-	-	77	50
MOUNTAIN .....	-	-	209	-	-	1	-	-	2	75	41
Montana .....	-	-	22	-	-	-	-	-	-	3	3
Idaho .....	-	-	-	-	-	-	-	-	-	10	-
Wyoming .....	-	-	93	-	-	1	-	-	-	-	-
Colorado .....	-	-	50	-	-	-	-	-	1	4	11
New Mexico .....	-	-	11	-	-	-	-	-	-	40	7
Arizona .....	-	-	25	-	-	-	-	-	-	14	15
Utah .....	-	-	7	-	-	-	-	-	1	2	5
Nevada .....	-	-	1	-	-	-	-	-	-	2	-
PACIFIC .....	20	-	303	1	1	6	3	2	35	223	245
Washington .....	-	-	243	1	1	-	-	-	-	19	19
Oregon .....	-	-	3	-	-	1	-	-	5	36	30
California .....	20	-	-	-	-	5	3	2	30	157	190
Alaska *	-	-	17	-	-	-	-	-	-	2	3
Hawaii .....	-	-	40	-	-	-	-	-	-	9	3
Guam *	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	-	11	-	-	-	-	-	-	2	1
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: (1972) Minn. 4

Brucellosis: (1972) Okla. 2

Chickenpox: (1972) Me. 68, Minn. 25, Guam 2, (1973) Mo. 63, Ark. 2, Guam 8

Encephalitis, primary: (1972) Minn. 1, Ark. 1

Encephalitis, post-infectious: (1972) Minn. 1

Hepatitis B: (1972) Okla. 1, Alaska 3

Hepatitis A: (1972) Me. 8, N.J. delete 1, Ind. delete 1, Kans. 4, Ga. 2, Ark. 2,  
La. delete 1, Okla. 4, Alaska 3, Guam 1, (1973) Mo. 20, Ark. 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JANUARY 20, 1973 AND JANUARY 22, 1972 (3rd WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	—	6	605	1,599	1,913	33	83	103	2,441	4,912	403	873
NEW ENGLAND .....	—	—	233	615	46	1	6	3	75	223	69	94
Maine *	—	—	1	1	6	—	—	1	2	5	1	1
New Hampshire *	—	—	35	92	4	—	1	—	4	5	1	1
Vermont .....	—	—	1	1	2	—	—	—	2	53	3	4
Massachusetts .....	—	—	142	337	—	—	3	—	45	91	20	39
Rhode Island .....	—	—	—	4	27	—	—	2	10	15	—	—
Connecticut .....	—	—	54	180	7	1	2	—	12	54	44	49
MIDDLE ATLANTIC .....	—	2	26	133	190	7	15	8	200	474	94	128
Upstate New York .....	—	1	7	14	3	1	1	3	NN	NN	5	11
New York City .....	—	—	13	77	19	4	6	1	89	286	2	10
New Jersey .....	—	—	4	31	165	1	4	3	66	93	79	95
Pennsylvania .....	—	1	2	11	3	1	4	1	45	95	8	12
EAST NORTH CENTRAL .....	—	1	161	413	901	—	3	16	759	1,456	84	197
Ohio .....	—	—	12	18	19	—	3	8	41	148	7	18
Indiana .....	—	—	13	40	279	—	—	1	50	121	20	54
Illinois .....	—	—	53	165	249	—	—	3	70	229	11	24
Michigan .....	—	1	46	105	112	—	—	4	385	501	20	52
Wisconsin .....	—	—	37	85	242	—	—	—	213	457	26	49
WEST NORTH CENTRAL .....	—	—	20	48	31	5	6	4	245	320	16	145
Minnesota *	—	—	—	3	1	—	—	—	2	2	1	1
Iowa .....	—	—	19	44	22	2	3	—	235	248	11	23
Missouri *	—	—	1	1	3	1	1	—	5	40	3	106
North Dakota .....	—	—	—	—	4	—	—	—	1	5	—	5
South Dakota .....	—	—	—	—	1	—	—	1	2	2	—	—
Nebraska .....	—	—	—	—	—	—	—	1	—	13	1	10
Kansas .....	—	—	—	—	—	2	2	2	—	10	—	—
SOUTH ATLANTIC .....	—	3	37	61	232	5	13	25	216	508	19	37
Delaware .....	—	—	—	—	—	—	—	1	15	40	—	—
Maryland .....	—	—	—	—	2	—	4	—	45	98	—	1
District of Columbia .....	—	—	1	1	—	1	1	—	2	4	—	1
Virginia .....	—	2	2	7	—	1	2	10	6	41	1	1
West Virginia .....	—	—	17	21	8	—	—	3	89	203	8	16
North Carolina .....	—	1	—	2	10	2	5	4	NN	NN	1	3
South Carolina .....	—	—	—	2	19	1	1	3	3	8	3	3
Georgia .....	—	—	—	1	19	—	—	—	—	—	1	1
Florida .....	—	—	17	27	174	—	—	4	56	114	5	11
EAST SOUTH CENTRAL .....	—	—	25	34	124	1	7	7	118	261	12	27
Kentucky .....	—	—	8	10	73	—	3	3	32	53	1	2
Tennessee .....	—	—	6	10	18	—	2	1	47	126	8	18
Alabama .....	—	—	—	—	22	—	1	2	37	72	1	3
Mississippi *	—	—	11	14	11	1	1	1	2	10	2	4
WEST SOUTH CENTRAL .....	—	—	18	60	83	4	8	10	99	312	36	67
Arkansas *	—	—	1	1	1	1	1	—	2	5	—	5
Louisiana .....	—	—	—	—	—	1	1	4	2	2	—	—
Oklahoma *	—	—	3	4	2	—	—	—	2	8	1	2
Texas .....	—	—	14	55	80	2	6	6	93	297	35	60
MOUNTAIN .....	—	—	6	42	123	1	7	1	120	335	6	28
Montana .....	—	—	1	1	1	—	—	—	6	14	1	1
Idaho .....	—	—	1	3	1	—	—	—	—	3	—	4
Wyoming .....	—	—	—	—	—	—	—	1	24	77	—	—
Colorado .....	—	—	1	16	79	—	2	—	14	25	4	13
New Mexico .....	—	—	2	17	4	1	1	—	50	108	1	6
Arizona .....	—	—	1	5	35	—	1	—	12	93	—	3
Utah .....	—	—	—	—	3	—	1	—	12	13	—	—
Nevada .....	—	—	—	—	—	—	2	—	2	2	—	1
PACIFIC .....	—	—	79	193	183	9	18	29	609	1,023	67	150
Washington .....	—	—	15	92	52	1	2	2	52	98	7	25
Oregon .....	—	—	14	29	4	—	2	1	71	184	13	31
California .....	—	—	50	70	121	8	14	26	449	669	47	94
Alaska .....	—	—	—	—	—	—	—	—	33	64	—	—
Hawaii .....	—	—	—	2	6	—	—	—	4	8	—	—
Guam *	—	—	—	—	—	—	—	—	—	—	—	—
Puerto Rico .....	—	—	20	95	6	—	—	—	8	29	—	3
Virgin Islands .....	—	—	—	—	—	—	—	—	—	—	—	—

\*Delayed reports: Measles (1972) N.H. 3, Miss. delete 4, (1973) Miss. delete 6  
Meningococcal infections: (1972) N.H. 1, Ark. 1

Mumps: (1972) Me. 4, Minn. 3, Okla. 1, Guam 3, (1973) Mo. 30  
Rubella: (1972) Me. 5, Minn. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JANUARY 20, 1973 AND JANUARY 22, 1972 (3rd WEEK) - Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES	1	584	1,393	7	3	9	1	2	15,835	603	58	139
NEW ENGLAND	-	12	27	-	-	-	-	-	521	12	5	8
Maine	-	-	-	-	-	-	-	-	13	-	5	8
New Hampshire	-	-	-	-	-	-	-	-	12	-	-	-
Vermont	-	-	-	-	-	-	-	-	12	-	-	-
Massachusetts	-	12	23	-	-	-	-	-	283	4	-	-
Rhode Island	-	-	3	-	-	-	-	-	76	-	-	-
Connecticut	-	-	1	-	-	-	-	-	125	8	-	-
MIDDLE ATLANTIC	1	111	241	-	-	3	-	1	2,865	108	-	2
Upstate New York	-	41	78	-	-	-	-	-	362	9	-	-
New York City	1	25	69	-	-	3	-	-	1,398	66	-	-
New Jersey	-	21	54	-	-	-	-	-	350	16	-	-
Pennsylvania	-	24	40	-	-	-	-	1	755	17	-	2
EAST NORTH CENTRAL	-	100	234	-	-	1	-	-	1,496	31	1	9
Ohio	-	42	103	-	-	-	-	-	365	6	-	-
Indiana	-	5	13	-	-	-	-	-	187	2	1	2
Illinois	-	22	53	-	-	-	-	-	229	7	-	1
Michigan *	-	19	19	-	-	1	-	-	583	15	-	-
Wisconsin	-	12	46	-	-	-	-	-	132	1	-	6
WEST NORTH CENTRAL	-	16	32	1	-	-	-	-	725	8	13	46
Minnesota *	-	-	1	-	-	-	-	-	203	4	5	9
Iowa	-	2	10	-	-	-	-	-	82	-	1	17
Missouri	-	5	9	1	-	-	-	-	340	4	4	7
North Dakota	-	-	-	-	-	-	-	-	14	-	3	10
South Dakota *	-	4	5	-	-	-	-	-	53	-	-	3
Nebraska *	-	2	3	-	-	-	-	-	33	-	-	-
Kansas *	-	3	4	-	-	-	-	-	-	-	-	-
SOUTH ATLANTIC	-	135	322	1	-	1	-	-	3,647	166	10	19
Delaware	-	-	2	-	-	-	-	-	47	1	-	-
Maryland	-	10	29	-	-	-	-	-	327	19	-	-
District of Columbia	-	1	14	-	-	-	-	-	435	13	-	-
Virginia	-	24	53	1	-	-	-	-	324	52	4	9
West Virginia	-	6	12	-	-	-	-	-	75	2	1	3
North Carolina	-	20	44	-	-	-	-	-	458	4	-	-
South Carolina	-	19	59	-	-	-	-	-	481	17	-	-
Georgia	-	17	45	-	-	-	-	-	572	31	2	3
Florida	-	38	64	-	-	1	-	-	928	27	3	4
EAST SOUTH CENTRAL	-	41	106	3	1	1	1	1	1,342	36	16	30
Kentucky *	-	8	23	1	-	-	-	-	158	20	4	9
Tennessee	-	12	32	2	-	-	-	-	509	7	5	14
Alabama	-	10	36	-	1	1	1	1	371	2	7	7
Mississippi	-	11	15	-	-	-	-	-	304	7	-	-
WEST SOUTH CENTRAL	-	52	122	2	-	-	-	-	2,003	86	7	11
Arkansas	-	9	20	-	-	-	-	-	154	2	-	1
Louisiana *	-	-	11	-	-	-	-	-	272	23	2	2
Oklahoma	-	4	12	2	-	-	-	-	182	2	-	3
Texas	-	39	79	-	-	-	-	-	1,395	59	5	5
MOUNTAIN	-	15	62	-	-	-	-	-	601	7	-	3
Montana	-	-	-	-	-	-	-	-	39	-	-	-
Idaho	-	-	-	-	-	-	-	-	35	1	-	-
Wyoming	-	-	2	-	-	-	-	-	-	-	-	-
Colorado	-	1	1	-	-	-	-	-	162	4	-	-
New Mexico	-	4	10	-	-	-	-	-	112	-	-	-
Arizona *	-	9	46	-	-	-	-	-	169	1	-	3
Utah	-	-	-	-	-	-	-	-	35	-	-	-
Nevada	-	1	3	-	-	-	-	-	49	1	-	-
PACIFIC	-	102	247	-	2	3	-	-	2,635	149	6	11
Washington	-	18	29	-	-	-	-	-	233	13	-	-
Oregon	-	4	4	-	-	-	-	-	306	5	-	-
California	-	77	203	-	2	3	-	-	2,018	127	5	10
Alaska	-	-	-	-	-	-	-	-	33	-	1	1
Hawaii	-	3	11	-	-	-	-	-	45	4	-	-
Guam *	-	-	1	-	-	-	-	-	-	-	-	-
Puerto Rico	-	13	23	-	-	-	-	-	69	22	1	3
Virgin Islands	-	-	-	-	-	-	-	-	6	-	-	-

\*Delayed reports: TB: (1972) Mich. 34, Minn. 6, Neb. 6, Kans. 3, Ky. delete 1, Guam 1, (1973) Guam 1  
Gonorrhea: (1972) Kans. 96, La. delete 12, Guam 5, (1973) Ariz. 38, Guam 21  
Animal rabies: (1972) S. Dak. 15, Kans. 1, (1973) Ariz. 2

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING JANUARY 20, 1973

Week No.

3

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	898	603	31	80	SOUTH ATLANTIC	1,554	829	44	87
Boston, Mass.	271	168	10	29	Atlanta, Ga.	138	65	4	3
Bridgeport, Conn.	45	29	2	6	Baltimore, Md.	341	184	9	5
Cambridge, Mass.	46	37	1	14	Charlotte, N. C.	65	34	3	—
Fall River, Mass.	42	28	2	1	Jacksonville, Fla.	136	73	7	3
Hartford, Conn.	66	38	6	—	Miami, Fla.	135	78	4	9
Lowell, Mass.	37	23	1	1	Norfolk, Va.	75	37	3	12
Lynn, Mass.	31	25	—	2	Richmond, Va.	129	66	2	18
New Bedford, Mass.	21	18	—	1	Savannah, Ga.	46	17	—	3
New Haven, Conn.	77	44	5	6	St. Petersburg, Fla.	128	106	—	8
Providence, R. I.	69	43	2	6	Tampa, Fla.	105	52	5	7
Somerville, Mass.	22	20	—	3	Washington, D. C.	208	95	6	15
Springfield, Mass.	54	38	2	4	Wilmington, Del.	48	22	1	4
Waterbury, Conn.	43	31	—	—	EAST SOUTH CENTRAL	997	588	28	52
Worcester, Mass.	74	61	—	7	Birmingham, Ala.	141	81	4	4
MIDDLE ATLANTIC	3,978	2,510	121	245	Chattanooga, Tenn.	63	35	1	4
Albany, N. Y.	63	39	3	4	Knoxville, Tenn.	51	36	2	2
Allentown, Pa.	31	20	—	4	Louisville, Ky.	192	130	4	16
Buffalo, N. Y.	161	100	4	5	Memphis, Tenn.	301	174	3	14
Camden, N. J.	37	23	5	4	Mobile, Ala.	93	45	6	1
Elizabeth, N. J.	32	21	—	3	Montgomery, Ala.	30	18	—	5
Erie, Pa.	52	38	—	4	Nashville, Tenn.	126	69	8	6
Jersey City, N. J.	73	45	3	9	WEST SOUTH CENTRAL	1,660	962	88	84
Newark, N. J.	114	58	5	7	Austin, Tex.	52	34	2	5
New York City, N. Y. †	2,175	1,391	61	136	Baton Rouge, La.	65	43	1	5
Paterson, N. J.	56	42	1	6	Corpus Christi, Tex.	39	28	2	2
Philadelphia, Pa.	503	296	16	10	Dallas, Tex.	241	130	8	5
Pittsburgh, Pa.	198	117	5	19	El Paso, Tex.	81	45	6	9
Reading, Pa.	64	48	1	6	Fort Worth, Tex.	136	75	13	7
Rochester, N. Y.	142	93	8	18	Houston, Tex.	253	131	12	10
Schenectady, N. Y.	23	14	—	—	Little Rock, Ark.	90	53	5	8
Scranton, Pa.	32	25	—	2	New Orleans, La.	240	133	18	8
Syracuse, N. Y.	106	68	2	2	Oklahoma City, Okla. *	116	72	6	4
Trenton, N. J.	54	30	4	—	San Antonio, Tex.	162	98	10	8
Utica, N. Y.	26	22	—	3	Shreveport, La.	106	68	2	7
Yonkers, N. Y.	36	20	3	3	Tulsa, Okla.	79	52	3	6
EAST NORTH CENTRAL	3,021	1,767	141	137	MOUNTAIN	623	367	23	46
Akron, Ohio	97	66	5	—	Albuquerque, N. Mex.	75	38	3	14
Canton, Ohio	56	36	4	5	Colorado Springs, Colo.	27	15	3	2
Chicago, Ill.	855	501	35	43	Denver, Colo.	132	77	3	9
Cincinnati, Ohio	195	119	4	10	Las Vegas, Nev.	33	17	—	3
Cleveland, Ohio	229	133	7	5	Ogden, Utah	26	17	1	2
Columbus, Ohio	187	108	10	7	Phoenix, Ariz.	138	89	7	2
Dayton, Ohio	123	76	6	6	Pueblo, Colo.	19	12	—	2
Detroit, Mich.	350	185	21	4	Salt Lake City, Utah	81	44	4	3
Evansville, Ind.	69	47	1	5	Tucson, Ariz.	92	58	2	9
Fort Wayne, Ind.	56	34	1	3	PACIFIC	2,331	1,571	58	145
Gary, Ind.	46	21	7	2	Berkeley, Calif.	31	20	—	5
Grand Rapids, Mich.	68	44	1	4	Fresno, Calif.	79	49	6	11
Indianapolis, Ind.	170	88	8	8	Glendale, Calif.	42	29	—	2
Madison, Wis.	47	26	3	9	Honolulu, Hawaii *	75	46	4	4
Milwaukee, Wis.	182	112	11	8	Long Beach, Calif.	143	81	2	13
Peoria, Ill.	44	27	4	2	Los Angeles, Calif.	778	532	10	19
Rockford, Ill.	36	18	3	8	Oakland, Calif.	116	86	8	9
South Bend, Ind.	39	23	1	5	Pasadena, Calif.	39	30	—	2
Toledo, Ohio	117	67	5	1	Portland, Oreg.	155	118	5	2
Youngstown, Ohio	55	36	4	2	Sacramento, Calif.	112	80	5	12
WEST NORTH CENTRAL	995	667	18	32	San Diego, Calif.	165	114	5	11
Des Moines, Iowa	75	57	—	5	San Francisco, Calif.	263	162	6	14
Duluth, Minn.	32	23	2	2	San Jose, Calif.	75	62	—	13
Kansas City, Kans.	76	45	5	—	Seattle, Wash.	161	91	6	11
Kansas City, Mo.	159	105	3	1	Spokane, Wash.	53	40	—	9
Lincoln, Nebr.	32	24	—	1	Tacoma, Wash.	44	31	1	8
Minneapolis, Minn.	118	75	4	7	Total	16,057	9,864	552	908
Omaha, Nebr.	124	90	—	4	Expected Number	13,619	8,014	559	580
St. Louis, Mo.	257	171	1	5	Cumulative Total (includes reported corrections for previous weeks)	45,192	27,396	1,572	2,406
St. Paul, Minn.	75	49	2	3					
Wichita, Kans.	47	28	1	4					

†Delayed report for week ending January 13, 1973

\*Estimate based on average percent of divisional total

## BRILL-ZINSSER — Continued

the course of ampicillin and improved rapidly. At this time, the *Proteus* OX19 titer had risen to 1:640, and acute and convalescent complement fixation tests on September 4 and September 15 showed the following results: Murine typhus—1:256 and 1:512, epidemic typhus—1:256 and 1:256, Rocky Mountain spotted fever <1:8 and 1:16, and Q fever <1:8 and <1:8, respectively.

Epidemiologic investigation revealed that as a child in western Russia, the patient had had measles and whooping cough, and in 1942, while working with typhus patients in Minsk, she had developed "typhus exanthem". The patient left the Soviet Union in 1944, was detained in Germany for 1 year and Austria for 7 years, and arrived in the United States in 1952. In 1960, she visited Greece for 26 months. She received typhus vaccine twice before she went and a booster dose shortly before her return to this country.

The patient's most recent foreign travel had been from August 6 to 21, 1972, when she toured Holland, Norway, Sweden, and Denmark with 39 Americans 13 to 79 years of age. The group traveled through provincial towns, but there was no camping, hiking, or animal exposure.

The patient and her husband live a half hour's drive from the Alexandria waterfront and have 1 pet, a 9-year-old dog. After returning from the tour, she reported working in

her garden but denied insect bites. Rodent infestation has not been a problem in her home or neighborhood, and no cases of murine typhus have been reported in the state for 3 years. (Reported by Richard E. Palmer, M.D., Director, Alexandria Hospital Laboratory; Angel A. Cardona, M.D., Director, Alexandria Health Department; and Karl A. Western, M.D., State Epidemiologist, Virginia State Department of Health.)

## Editorial Note

Brill-Zinsser disease, or recrudescent typhus fever, can occur decades after the primary attack. In the United States, it has been seen primarily in immigrants from eastern Europe, where a great pandemic of typhus raged in 1920-21. In World War II, the disease was common there and in German concentration camps. Although patients with Brill-Zinsser disease can infect lice and thereby give rise to an epidemic, they are not infectious in the absence of lice. In the present case, the diagnosis was based on the clinical picture, the history of epidemic "typhus exanthematicus" (in European literature), the apparent lack of exposure to murine typhus, and the high complement fixing antibody titer early in the illness. The typhus antigens employed were of the "soluble" type and usually do not distinguish between epidemic and murine typhus fever. Although persons who have had primary epidemic typhus fever may have demonstrable antibodies for many years, their titers are generally low.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

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Attn: Editor  
Morbidity and Mortality Weekly Report  
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CENTER FOR DISEASE CONTROL  
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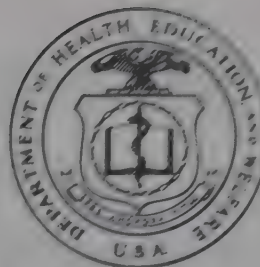


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421

# Morbidity and Mortality



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WEEKLY  
REPORTFor  
Week Ending

January 27, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION  
DATE OF RELEASE: FEBRUARY 2, 1973 - ATLANTA, GEORGIA 30333

## EPIDEMIOLOGIC NOTES AND REPORTS

## SALMONELLA AGONA - Arkansas

Between March and May 1972, 17 infections of *S. agona* were detected in residents of a northeast Arkansas town. Four of these persons were hospitalized with symptoms of severe gastroenteritis including nausea, diarrhea, fever, and abdominal cramps. The 13 remaining persons were asymptomatic. Five infected persons were detected through the routine salmonellosis screening program required by Arkansas state law for food handlers, and the remaining were detected during the subsequent investigation and by routine follow-up of contacts of infected persons.

Epidemiologic investigation revealed that the only common association of all infected persons was patronage of a local drive-in restaurant (Table 1). Analysis of food-specific attack rates for infected persons and 50 non-infected patrons and employees of Restaurant A showed that the infection

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rate was significantly higher in persons eating cole slaw and onions (Table 2).

Investigation of Restaurant A revealed marginal sanitary conditions and numerous errors in food handling procedures. The only work table present in the restaurant was used to cut up chicken and catfish as well as cabbage, onions, and lettuce. Employees also ate at this table during their lunch breaks. Of the environmental and food samples collected,

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	4th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 4 WEEKS		
	January 27, 1973	January 29, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	29	22	29	172	147	125
Brucellosis	3	4	2	7	10	6
Chickenpox	4,784	3,240	---	16,801	11,675	---
Diphtheria	3	1	1	8	6	8
Encephalitis, primary:						
Arthropod-borne and unspecified	11	10	14	48	58	68
Encephalitis, post-infectious	3	5	5	10	17	25
Hepatitis, serum (Hepatitis B)	140	188	116	516	720	498
Hepatitis, infectious (Hepatitis A)	975	1,214	1,113	3,655	4,316	4,316
Malaria	1	38	50	7	190	191
Measles (rubeola)	543	486	551	2,107	2,399	2,399
Meningococcal infections, total	28	29	80	111	132	246
Civilian	26	26	77	103	125	234
Military	2	3	4	8	7	12
Mumps	1,411	2,020	2,585	6,292	8,034	9,349
Rubella (German measles)	456	577	577	1,329	1,724	1,918
Tetanus	2	1	1	3	1	3
Tuberculosis, new active	525	610	---	1,918	1,920	---
Tularemia	—	—	2	7	8	7
Typhoid fever	3	7	6	12	17	20
Typhus, tick-borne (Rky. Mt. spotted fever)	—	3	—	2	8	1
Venereal Diseases:						
Gonorrhea	15,344	13,413	---	56,397	50,388	---
Syphilis, primary and secondary	523	455	---	2,066	1,618	---
Rabies in animals	68	62	82	208	243	243

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	—	Poliomyelitis, total:	—
Botulism:	—	Paralytic:	—
Congenital rubella syndrome:	1	Psittacosis:*	1
Leprosy:	1	Rabies in man:	—
Leptospirosis: Mo.-1, R.I.-1	5	Trichinosis:*	4
Plague:	—	Typhus, murine:	—

\*Delayed reports: Psittacosis: (1972) Pa. 3, Mont. 1  
Trichinosis: (1972) Pa. 1

## SALMONELLA AGONA — Continued

Table 1  
Incidence of *S. agona* Infections, by Restaurant Patronage  
Arkansas — May 1972

Restau- rant	Exposed			Not Exposed		
	In- fected	Non- Infected	Attack Rate (Percent)	In- fected	Non- Infected	Attack Rate (Percent)
A	17	50	25	0	23	0*
C	6	16	27	11	57	16
B	5	39	11	12	34	26
D	1	8	11	15	65	19
E	6	20	23	11	43	20
F	3	21	13	14	52	21

\*p = 0.004 (Fishers exact test)

Table 2  
Food-Specific Attack Rates, Restaurant A  
Arkansas — May 1972

Food Item	Ate			Did Not Eat		
	In- fected	Non- In- fected	Attack Rate (Percent)	In- fected	Non- In- fected	Attack Rate (Percent)
Slaw	15	29	34	2	21	9*
Hamburgers	14	42	25	3	8	27
Hot Dogs	7	18	28	10	32	24
Chili Dogs	9	17	35	8	33	20
Coney Dogs	9	16	36	8	19	30
Chicken	11	24	32	6	27	18
Onions**	10	16	39	2	20	9
French Fries	17	45	28	0	5	0

\*p < 0.05

\*\*Interviewees were asked to add this item to the questionnaire, but not everyone did so.

*S. agona* was isolated from the table top, knives, meat slicer, sink, fresh-frozen catfish, fresh chicken parts, and lettuce. From the food-specific attack rates and the culture results, it was apparent that cross-contamination occurred from either raw chicken or catfish to food items which were eaten raw.

Further investigation revealed that the chicken was the source of infection for the restaurant and came from a large Mississippi poultry operation. *S. agona* was recovered from the slaughterhouse and from offal at the rendering plant. The organism was not recovered from the hatchery, breeder, or broiler flocks nor from the complete feed or various feed ingredients. However, 1 or 2 deliveries of feed ingredients are made weekly, and samples were collected more than 2 months after the clinical cases occurred. Peruvian fishmeal made up 8% of the complete feed ration for the broiler flocks in this operation.

The Food and Drug Administration, which is responsible for monitoring imported fishmeal for salmonella contamination, isolated *S. agona* from Peruvian fishmeal on 2 occasions in 1970 and from Puerto Rican fishmeal on 2 occasions in 1971-72. Domestically produced fishmeal which is also monitored for salmonella contamination has never been found positive for this serotype.

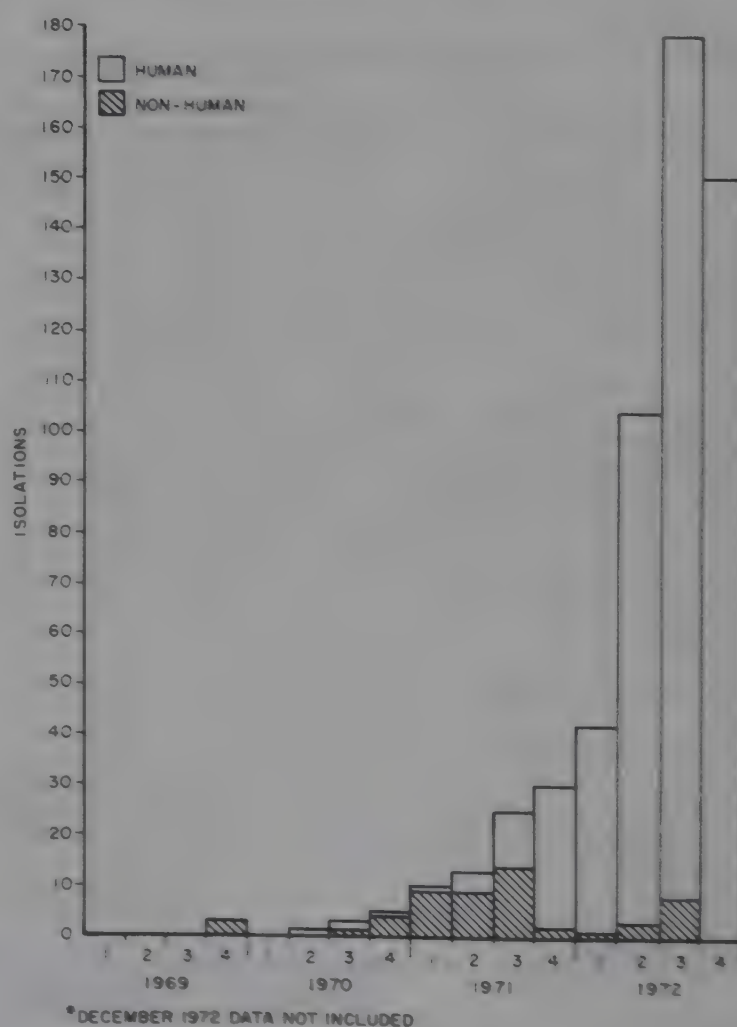
(Reported by G. Doty Murphy III, M.D., State Epidemiologist, Arkansas State Board of Health; and 2 EIS Officers.)

## Editorial Note

Prior to 1971, *S. agona* was reported from humans only 6 times in this country, but during the past 18 months, the number reported has markedly increased (Figure 1). In the last quarter of 1972, it ranked 9th in the list of most commonly reported serotypes. Twenty-seven states have reported isolation of *S. agona*, but the majority have been from Pennsylvania, Arkansas, Michigan, Wisconsin, Maryland, and Illinois.

The same increases in and epidemiologic associations of *S. agona* have been observed in several other countries. The 1st isolations in Israel and the Netherlands were from Peruvian fishmeal in 1969 (1, 2). In a short period of time, this serotype was recovered from poultry or other animals whose feeds are generally supplemented with fishmeal, and eventually from humans. The 1st isolation of *S. agona* in England was in 1970 from "imported fishmeal", and the organism was soon commonly cultured from food animals and meat products. Human cases were reported with increasing frequency in 1971, and at the present time, *S. agona* is the 2nd most common serotype isolated from humans in Britain (3). From the international data and the epidemiologic evidence of this investigation, Peruvian fishmeal is probably the original vehicle for the occurrence of *S. agona* infection in widely scattered parts of the world since 1969.

Figure 1  
ISOLATIONS OF *SALMONELLA AGONA*, BY QUARTER  
UNITED STATES — 1969-1972 \*



\*DECEMBER 1972 DATA NOT INCLUDED

## References

1. Reports from the National Salmonella Centre, Israel, 1968-1970
2. Reports from the National Salmonella Centre, National Institute of Public Health, Utrecht, Netherlands, 1968-1970
3. *Salmonella agona*: A new hazard. Brit Med J 4:559, 1972

## CURRENT TRENDS

## INFLUENZA — Alabama, Alaska, Massachusetts, South Carolina, Utah, Wyoming

## Alabama

Birmingham has reported an increased incidence of respiratory disease, industrial absenteeism, and deaths from all causes beginning with the 2nd week in January. The etiologic agent isolated from throat washings in 3 cases of respiratory disease was influenzavirus A/England/42/72. Similar outbreaks have also been reported from Montgomery and Oneonta. (Reported by Clyde Sellers, Director, Bureau of Communicable Diseases, Alex Hicks, Disease Surveillance Coordinator, and George Hardy, M.D., County Health Officer, Jefferson County Health Department; Frederick S. Wolf, M.D., State Epidemiologist, Alabama State Department of Health; and an EIS Officer.)

## Alaska

Between mid- and late December, an outbreak of influenza-like disease was reported from Ketchikan to the Division of Public Health. The majority of cases were in young adults, but patients requiring hospitalization were almost entirely elderly persons or those with underlying chronic diseases. The etiologic agent responsible for the outbreak appears to be similar to A/England/42/72. At the present time, influenza is reported from Fairbanks and the central and south central areas of the state.

(Reported by Margaret Bixby, Public Health Nurse, Acting Regional Health Officer; and Donald K. Freedman, M.D., Director, Division of Public Health, Alaska Department of Health and Social Services; and an EIS Officer.)

## Massachusetts

The State Health Department reports that influenza morbidity is decreasing throughout the state. In Boston, school absenteeism is approximately 1/2 less than that reported a few weeks ago. Industrial absenteeism is also returning to normal levels.

(Reported by Nicholas J. Fiumara, M.D., State Epidemiologist, Massachusetts Department of Public Health.)

## South Carolina

The South Carolina State Board of Health reports scattered outbreaks of influenza-like disease throughout the state. There have been 3 isolations of influenza A virus and 2 seroconversions of influenza A. School and industrial absenteeism does not appear to be significantly increased at this time. (Reported by W. B. Gamble, M.D., State Epidemiologist, South Carolina State Board of Health.)

## Utah

Industrial absenteeism is increased over previous weeks;

however, emergency room visits and school absenteeism in Salt Lake City were not significantly higher. There is moderate influenza activity throughout the state with localized outbreaks in Piute County resulting in some school closings. (Reported by Taira Fukushima, M.D., State Epidemiologist, Utah State Division of Health.)

## Wyoming

The State Health Department reports increased influenza activity in the state. In Casper and Powell, schools were closed January 30 because of the large number of teachers that were ill.

(Reported by Herman S. Parish, M.D., Assistant Director, Division of Health and Medical Services, Wyoming Department of Health and Social Services.)

## Editorial Note

Over half the states are reporting outbreaks of influenza or influenza-like disease. Data from WHO cooperating laboratories throughout the country showing an increase in the number of specimens processed and the number of viral isolations reflect the increase in influenza activity (Table 3).

Nationally, deaths due to pneumonia and influenza continue to exceed the epidemic threshold for the 4th consecutive week; however, this week the total number of deaths is approximately the same as last week. At the present time, there have been 1,027 excess deaths due to pneumonia and influenza, a figure smaller than that reported for the same period last year. Regionally, the Pacific area continues to be the most heavily affected. Mortality increased this week in the East South Central, East North Central, Mountain, Pacific, New England and West North Central regions but decreased in the Middle Atlantic, South Atlantic, and West South Central areas.

Table 3  
Influenza Laboratory Surveillance — United States

Week Ending	Number of Laboratories Participating	Viral Isolation		Paired Sera	
		Number Tested	Number Isolates	Number Tested	Number Positive
1/6/73	47	488	69*	306	12
1/13/73	43	670	114**	427	51***
1/20/73	45	678	135	417	60

\*Three were influenza B and were from Hawaii.

\*\*Eleven were influenza B; 10 were from Hawaii, 1 was from Oregon.

\*\*\*One was influenza B and was from Milwaukee, Wisconsin.

## EPIDEMIOLOGIC NOTES AND REPORTS

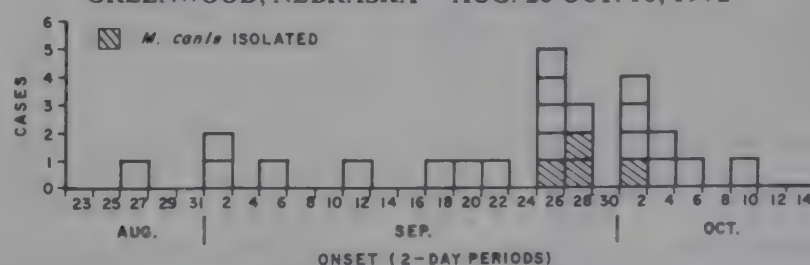
EPIDEMIC RINGWORM DUE TO *MICROSPORUM CANIS* — Nebraska

Between Aug. 26 and Oct. 10, 1972, 25 cases of dermatophytosis occurred among 109 students at an elementary school in Greenwood, Nebraska (Figure 2). Cases were evenly distributed in all grades, kindergarten through 6. Two culture surveys were conducted, and *Microsporum canis* was isolated on Sabourade's agar from 4 children of 2 families.

Lesions were confined primarily to the trunk, neck, face, and upper limb areas, but 3 (12%) of the 25 cases also developed scalp lesions later in the course of their illness. A school-based treatment program utilizing topical application

(Continued on page 36)

Figure 2  
RINGWORM CASES, BY DATE OF ONSET\*  
GREENWOOD, NEBRASKA — AUG. 26-OCT. 10, 1972



\* DATE OF ONSET FOR 1 CASE UNKNOWN

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JANUARY 27, 1973 AND JANUARY 29, 1972 (4th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
				1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES .....	29	3	4,784	3	8	11	10	3	140	975	1,214
NEW ENGLAND .....	-	-	611	-	2	-	1	-	7	51	83
Maine *	-	-	25	-	-	-	-	-	-	1	9
New Hampshire *	-	-	17	-	-	-	-	-	2	3	7
Vermont .....	-	-	19	-	-	-	-	-	-	3	2
Massachusetts .....	-	-	350	-	-	-	1	-	3	26	47
Rhode Island .....	-	-	69	-	2	-	-	-	-	7	4
Connecticut .....	-	-	131	-	-	-	-	-	2	11	14
MIDDLE ATLANTIC .....	6	-	97	-	-	1	1	2	39	160	195
Upstate New York .....	-	-	4	-	-	-	1	1	3	39	39
New York City .....	4	-	90	-	-	1	-	-	14	32	83
New Jersey .....	2	-	NN	-	-	-	-	-	3	23	59
Pennsylvania *	-	-	3	-	-	-	-	1	19	66	14
EAST NORTH CENTRAL .....	2	-	1,981	-	-	5	3	-	22	181	197
Ohio *	1	-	466	-	-	3	-	-	9	65	29
Indiana .....	-	-	236	-	-	-	-	-	2	15	6
Illinois .....	-	-	-	-	-	2	2	-	5	41	56
Michigan .....	1	-	496	-	-	-	1	-	6	58	99
Wisconsin .....	-	-	783	-	-	-	-	-	-	2	7
WEST NORTH CENTRAL .....	-	1	650	-	2	-	-	1	4	28	32
Minnesota *	-	-	90	-	-	-	-	1	-	2	2
Iowa .....	-	1	457	-	-	-	-	-	1	7	7
Missouri .....	-	-	28	-	-	-	-	-	1	12	8
North Dakota .....	-	-	55	-	-	-	-	-	-	2	2
South Dakota .....	-	-	-	-	2	-	-	-	-	1	3
Nebraska .....	-	-	-	-	-	-	-	-	-	-	-
Kansas *	-	-	20	-	-	-	-	-	2	4	10
SOUTH ATLANTIC .....	6	1	506	-	-	3	3	-	17	115	188
Delaware .....	-	-	16	-	-	-	-	-	-	3	3
Maryland *	1	-	22	-	-	-	1	-	1	11	32
District of Columbia .....	-	-	-	-	-	-	-	-	-	-	2
Virginia .....	2	1	27	-	-	1	-	-	1	21	21
West Virginia *	-	-	419	-	-	-	-	-	1	8	11
North Carolina *	-	-	NN	-	-	-	1	-	2	20	39
South Carolina .....	-	-	21	-	-	1	1	-	-	4	8
Georgia *	-	-	1	-	-	-	-	-	-	19	23
Florida .....	3	-	-	-	-	1	-	-	12	29	49
EAST SOUTH CENTRAL .....	2	-	185	-	-	-	1	-	-	77	72
Kentucky .....	-	-	163	-	-	-	-	-	-	30	31
Tennessee .....	-	-	NN	-	-	-	1	-	-	39	29
Alabama .....	2	-	6	-	-	-	-	-	-	7	4
Mississippi .....	-	-	16	-	-	-	-	-	-	1	8
WEST SOUTH CENTRAL .....	-	1	323	-	-	-	-	-	9	108	107
Arkansas *	-	-	1	-	-	-	-	-	-	3	2
Louisiana .....	-	1	NN	-	-	-	-	-	4	1	12
Oklahoma *	-	-	22	-	-	-	-	-	5	24	11
Texas .....	-	-	300	-	-	-	-	-	-	80	82
MOUNTAIN .....	2	-	95	-	-	-	-	-	1	35	98
Montana .....	-	-	13	-	-	-	-	-	-	9	6
Idaho .....	-	-	-	-	-	-	-	-	1	2	8
Wyoming .....	-	-	-	-	-	-	-	-	-	2	3
Colorado .....	-	-	38	-	-	-	-	-	-	-	47
New Mexico .....	2	-	22	-	-	-	-	-	-	11	17
Arizona .....	-	-	22	-	-	-	-	-	-	6	14
Utah .....	-	-	-	-	-	-	-	-	-	5	3
Nevada .....	-	-	-	-	-	-	-	-	-	-	-
PACIFIC .....	11	-	336	3	4	2	1	-	41	220	242
Washington .....	-	-	292	3	4	-	-	-	2	19	32
Oregon .....	1	-	-	-	-	-	-	-	2	33	24
California .....	10	-	-	-	-	2	1	-	37	163	177
Alaska *	-	-	15	-	-	-	-	-	-	1	-
Hawaii .....	-	-	29	-	-	-	-	-	-	4	9
Guam .....	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	-	8	-	-	-	-	-	1	13	7
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: (1972) Minn. 1, (1973) Md. 1  
Brucellosis: (1972) Ga. 1, Ohio 1  
Chickenpox: (1972) Me. 1, Ohio 1, (1973) Md. 1, Okla. 1  
Encephalitis, primary: (1972) Pa. 1  
Encephalitis, post-infectious: (1972) Minn. 1  
Hepatitis B: (1972) N.C. delete 1  
Hepatitis A: (1972) Me. 2, Kans. 2, W. Va. delete 1, N.C. delete 1, Ark. 1,  
Okla. 5, Alaska 2, (1973) N.H. delete 2, Md. 5, Ark. 3

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JANUARY 27, 1973 AND JANUARY 29, 1972 (4th WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	1	7	543	2,107	2,399	28	111	132	1,411	6,292	456	1,329
NEW ENGLAND .....	—	—	231	846	107	—	6	3	52	275	36	130
Maine *	—	—	—	1	15	—	—	1	2	7	1	2
New Hampshire .....	—	—	33	125	6	—	1	—	7	12	2	3
Vermont .....	—	—	13	14	30	—	—	—	2	55	1	5
Massachusetts *	—	—	105	442	2	—	3	—	17	108	17	56
Rhode Island .....	—	—	22	26	27	—	—	2	10	25	3	3
Connecticut .....	—	—	58	238	27	—	2	—	14	68	12	61
MIDDLE ATLANTIC .....	—	2	38	171	231	5	20	9	94	568	21	149
Upstate New York .....	—	1	6	20	4	5	6	3	NN	NN	13	24
New York City .....	—	—	30	107	26	—	6	1	33	319	1	11
New Jersey .....	—	—	2	33	192	—	4	3	43	136	5	100
Pennsylvania .....	—	1	—	11	9	—	4	2	18	113	2	14
EAST NORTH CENTRAL .....	—	1	150	563	1,059	6	9	18	436	1,892	105	302
Ohio .....	—	—	6	24	20	4	7	9	47	195	21	39
Indiana .....	—	—	23	63	288	—	—	1	40	161	21	75
Illinois .....	—	—	54	219	277	1	1	3	108	337	17	41
Michigan *	—	1	44	149	164	1	1	5	125	626	15	67
Wisconsin .....	—	—	23	108	310	—	—	—	116	573	31	80
WEST NORTH CENTRAL .....	—	—	19	67	45	2	8	7	124	444	32	177
Minnesota .....	—	—	—	3	1	—	—	—	11	13	3	4
Iowa .....	—	—	13	57	22	—	3	—	80	328	16	39
Missouri .....	—	—	2	3	15	2	3	1	22	62	1	107
North Dakota .....	—	—	1	1	4	—	—	—	7	12	8	13
South Dakota .....	—	—	—	—	1	—	—	1	—	2	—	—
Nebraska .....	—	—	—	—	2	—	—	2	—	13	2	12
Kansas .....	—	—	3	3	—	—	2	3	4	14	2	2
SOUTH ATLANTIC .....	—	3	10	71	282	4	17	34	141	649	125	162
Delaware .....	—	—	—	—	—	—	—	1	10	50	—	—
Maryland .....	—	—	—	—	3	3	7	2	17	115	1	2
District of Columbia .....	—	—	—	1	—	—	1	1	—	4	—	1
Virginia .....	—	2	—	7	—	1	3	11	7	48	—	1
West Virginia .....	—	—	—	21	10	—	—	3	60	263	4	20
North Carolina .....	—	1	—	2	12	—	5	5	NN	NN	1	4
South Carolina .....	—	—	—	2	29	—	1	6	3	11	—	3
Georgia .....	—	—	—	1	19	—	—	—	—	—	1	2
Florida .....	—	—	10	37	209	—	—	5	44	158	118	129
EAST SOUTH CENTRAL .....	—	—	12	46	154	4	11	11	59	320	28	55
Kentucky .....	—	—	2	12	85	1	4	5	15	68	22	24
Tennessee .....	—	—	10	20	21	2	4	3	44	170	4	22
Alabama .....	—	—	—	—	30	1	2	2	—	72	1	4
Mississippi .....	—	—	—	14	18	—	1	1	—	10	1	5
WEST SOUTH CENTRAL .....	—	—	30	90	107	3	11	14	182	494	29	96
Arkansas .....	—	—	—	1	1	—	1	—	4	9	—	5
Louisiana .....	—	—	—	—	4	—	1	6	—	2	—	—
Oklahoma *	—	—	—	4	2	2	2	—	5	13	1	3
Texas .....	—	—	30	85	100	1	7	8	173	470	28	88
MOUNTAIN .....	—	—	13	55	138	—	7	2	65	369	17	45
Montana .....	—	—	—	1	1	—	—	—	3	17	3	4
Idaho .....	—	—	1	4	1	—	—	—	11	14	—	4
Wyoming .....	—	—	—	—	—	—	—	1	—	77	—	—
Colorado .....	—	—	1	17	85	—	2	—	3	28	5	18
New Mexico .....	—	—	10	27	7	—	1	1	28	136	3	9
Arizona *	—	—	1	6	40	—	1	—	17	79	3	6
Utah .....	—	—	—	—	4	—	1	—	3	16	3	3
Nevada .....	—	—	—	—	—	—	2	—	—	2	—	1
PACIFIC .....	1	1	40	198	276	4	22	34	258	1,281	63	213
Washington .....	—	—	20	112	64	—	2	3	29	127	13	38
Oregon .....	—	—	13	42	7	—	2	1	82	266	17	48
California *	1	1	7	42	197	4	18	30	137	806	32	126
Alaska .....	—	—	—	—	—	—	—	—	7	71	—	—
Hawaii .....	—	—	—	2	8	—	—	—	3	11	1	1
Guam .....	—	—	—	—	—	—	—	—	—	—	—	—
Puerto Rico .....	—	—	42	137	16	—	—	—	18	47	—	3
Virgin Islands .....	—	—	—	—	—	—	—	1	—	—	—	—

\*Delayed reports: Malaria: (1972) Mich. delete 1

Measles: (1972) Me. 1, Mass. delete 20, (1973) Calif. delete 35

Mumps: (1972) Me. 1, Okla. 1, (1973) Ariz. delete 31

Rubella: (1972) Me. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JANUARY 27, 1973 AND JANUARY 29, 1972 (4th WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	
									1973	1973		
UNITED STATES .....	3	525	1,918	7	3	12	-	2	15,344	523	68	
NEW ENGLAND .....	-	10	37	-	-	-	-	-	365	12	4	
Maine .....	-	2	2	-	-	-	-	-	35	1	4	
New Hampshire .....	-	1	1	-	-	-	-	-	9	-	-	
Vermont .....	-	1	1	-	-	-	-	-	6	1	-	
Massachusetts .....	-	5	28	-	-	-	-	-	157	-	-	
Rhode Island .....	-	1	4	-	-	-	-	-	32	-	-	
Connecticut .....	-	-	1	-	-	-	-	-	126	10	-	
MIDDLE ATLANTIC .....	2	96	337	-	1	4	-	1	2,046	124	1	
Upstate New York .....	-	25	103	-	-	-	-	-	615	8	-	
New York City .....	1	24	93	-	1	4	-	-	858	81	-	
New Jersey .....	1	20	74	-	-	-	-	-	215	22	-	
Pennsylvania *	-	27	67	-	-	-	-	1	358	13	1	
EAST NORTH CENTRAL .....	-	87	321	-	-	1	-	-	1,908	39	4	
Ohio .....	-	36	139	-	-	-	-	-	568	4	-	
Indiana .....	-	14	27	-	-	-	-	-	334	14	-	
Illinois .....	-	23	76	-	-	-	-	-	175	4	3	
Michigan *	-	14	33	-	-	1	-	-	574	14	-	
Wisconsin *	-	-	46	-	-	-	-	-	257	3	1	
WEST NORTH CENTRAL .....	-	27	59	1	-	-	-	-	960	14	18	
Minnesota *	-	1	2	-	-	-	-	-	174	3	7	
Iowa .....	-	-	10	-	-	-	-	-	248	2	7	
Missouri .....	-	23	32	1	-	-	-	-	228	9	1	
North Dakota *	-	-	-	-	-	-	-	-	15	-	3	
South Dakota .....	-	1	6	-	-	-	-	-	41	-	-	
Nebraska *	-	-	3	-	-	-	-	-	123	-	-	
Kansas *	-	2	6	-	-	-	-	-	131	-	-	
SOUTH ATLANTIC .....	1	99	421	1	-	1	-	-	3,567	173	1	
Delaware .....	-	5	7	-	-	-	-	-	54	3	-	
Maryland .....	-	12	41	-	-	-	-	-	438	17	-	
District of Columbia .....	-	6	20	-	-	-	-	-	254	19	-	
Virginia .....	-	12	65	1	-	-	-	-	406	55	1	
West Virginia .....	-	5	17	-	-	-	-	-	50	-	-	
North Carolina *	-	20	64	-	-	-	-	-	599	14	-	
South Carolina *	-	3	62	-	-	-	-	-	345	12	-	
Georgia *	-	19	63	-	-	-	-	-	567	19	-	
Florida .....	1	18	82	-	-	1	-	-	854	34	-	
EAST SOUTH CENTRAL .....	-	60	166	3	-	1	-	1	1,346	30	18	
Kentucky *	-	13	36	1	-	-	-	-	145	15	5	
Tennessee .....	-	16	48	2	-	-	-	-	563	9	6	
Alabama .....	-	22	58	-	-	1	-	1	235	1	5	
Mississippi .....	-	9	24	-	-	-	-	-	403	5	-	
WEST SOUTH CENTRAL .....	-	40	162	2	1	1	-	-	2,522	51	12	
Arkansas *	-	2	22	-	-	-	-	-	661	-	4	
Louisiana *	-	-	11	-	-	-	-	-	367	15	-	
Oklahoma *	-	2	14	2	1	1	-	-	140	6	4	
Texas *	-	36	115	-	-	-	-	-	1,354	30	4	
MOUNTAIN .....	-	18	80	-	-	-	-	-	451	17	-	
Montana *	-	-	-	-	-	-	-	-	28	-	-	
Idaho .....	-	4	4	-	-	-	-	-	24	-	-	
Wyoming .....	-	1	3	-	-	-	-	-	-	-	-	
Colorado .....	-	-	1	-	-	-	-	-	-	-	-	
New Mexico .....	-	5	15	-	-	-	-	-	101	6	-	
Arizona .....	-	8	54	-	-	-	-	-	73	1	-	
Utah *	-	-	-	-	-	-	-	-	144	4	-	
Nevada .....	-	-	3	-	-	-	-	-	33	-	-	
PACIFIC .....	-	88	335	-	1	4	-	-	48	6	-	
Washington .....	-	10	39	-	-	-	-	-	2,179	63	10	
Oregon .....	-	8	12	-	-	-	-	-	271	4	-	
California .....	-	64	267	-	1	4	-	-	258	2	-	
Hawaii .....	-	-	-	-	-	-	-	-	1,552	52	9	
Hawaii .....	-	6	17	-	-	-	-	-	53	4	1	
Hawaii .....	-	-	-	-	-	-	-	-	45	1	-	
Guam .....	-	-	1	-	-	-	-	-	-	-	-	
Principles .....	-	17	40	-	-	-	-	-	-	-	-	
Virgin Islands .....	-	-	-	-	-	-	-	-	91	14	1	
									2	-	-	

\*Delayed reports: TB (1972) Minn. 32, Minn. 7, N. Dak. delete 1, Neb. 9, N.C. delete 5, S.C. 40,  
Ky. delete 1, Mont. 2, Utah 0  
Tularemia (1972) Ark. 3, Okla. 1  
Typhoid (1972) Ga. 1

RMSF (1972) Pa. 4  
Gonorrhea (1972) Kans. 84, (1973) La. delete 1  
Syphilis (1972) Wis. delete 1, Kans. 2  
Rabies (1972) Minn. 1, Kans. 1, (1973) Tex. 1

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING JANUARY 27, 1973

Week No.

4

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	829	531	31	82	SOUTH ATLANTIC	1,451	814	47	82
Boston, Mass.	253	149	12	35	Atlanta, Ga.	128	64	2	7
Bridgeport, Conn.	27	16	—	2	Baltimore, Md.	278	161	4	5
Cambridge, Mass.	32	23	1	9	Charlotte, N. C.	58	32	3	1
Fall River, Mass.	51	35	1	2	Jacksonville, Fla.	63	39	2	1
Hartford, Conn.	56	36	1	3	Miami, Fla.	132	73	2	9
Lowell, Mass.	28	21	—	2	Norfolk, Va.	78	33	1	11
Lynn, Mass.	34	22	1	4	Richmond, Va.	141	79	22	9
New Bedford, Mass.	34	26	—	5	Savannah, Ga.	38	23	—	2
New Haven, Conn.	60	31	9	1	St. Petersburg, Fla.	119	103	3	10
Providence, R. I.	86	50	4	8	Tampa, Fla.	77	42	1	9
Somerville, Mass.	13	8	—	—	Washington, D. C.	313	152	5	18
Springfield, Mass.	51	38	1	8	Wilmington, Del.	26	13	2	—
Waterbury, Conn.	33	20	1	1	EAST SOUTH CENTRAL	730	390	32	61
Worcester, Mass.	71	56	—	2	Birmingham, Ala.	108	50	11	3
MIDDLE ATLANTIC	3,524	2,220	78	213	Chattanooga, Tenn.	66	36	3	8
Albany, N. Y.	64	39	3	1	Knoxville, Tenn.	34	19	1	—
Allentown, Pa.	23	18	—	1	Louisville, Ky.	144	84	4	16
Buffalo, N. Y. *	162	100	4	10	Memphis, Tenn.	149	84	3	8
Camden, N. J.	38	24	1	3	Mobile, Ala.	68	39	3	3
Elizabeth, N. J.	37	20	4	4	Montgomery, Ala.	46	13	3	10
Erie, Pa.	41	25	3	7	Nashville, Tenn.	115	65	4	13
Jersey City, N. J.	72	48	—	5	WEST SOUTH CENTRAL	1,465	808	64	81
Newark, N. J.	69	35	5	2	Austin, Tex.	38	27	3	6
New York City, N. Y. *	1,769	1,119	34	97	Baton Rouge, La.	52	28	3	5
Paterson, N. J.	46	30	2	5	Corpus Christi, Tex.	50	28	2	—
Philadelphia, Pa.	491	307	8	14	Dallas, Tex.	205	112	9	6
Pittsburgh, Pa.	232	129	4	29	El Paso, Tex.	74	39	5	10
Reading, Pa.	52	41	—	8	Fort Worth, Tex.	74	48	3	4
Rochester, N. Y.	127	88	1	13	Houston, Tex.	292	138	8	10
Schenectady, N. Y.	23	18	—	—	Little Rock, Ark.	86	48	9	7
Scranton, Pa.	51	37	1	5	New Orleans, La.	207	104	7	5
Syracuse, N. Y.	116	62	6	1	Oklahoma City, Okla. *	103	61	4	4
Trenton, N. J.	45	33	2	—	San Antonio, Tex.	153	93	6	10
Utica, N. Y.	22	15	—	5	Shreveport, La.	73	40	2	7
Yonkers, N. Y.	44	32	—	3	Tulsa, Okla.	58	42	3	7
EAST NORTH CENTRAL	2,912	1,723	98	141	MOUNTAIN	579	345	20	50
Akron, Ohio	66	48	1	1	Albuquerque, N. Mex.	48	29	4	14
Canton, Ohio	47	32	3	7	Colorado Springs, Colo.	33	19	1	4
Chicago, Ill.	792	460	26	36	Denver, Colo.	117	78	2	7
Cincinnati, Ohio	195	123	2	10	Las Vegas, Nev.	32	15	1	4
Cleveland, Ohio	206	93	12	5	Ogden, Utah	27	17	—	3
Columbus, Ohio	138	76	4	4	Phoenix, Ariz.	121	59	5	2
Dayton, Ohio	115	68	3	4	Pueblo, Colo.	30	23	—	3
Detroit, Mich.	447	240	16	24	Salt Lake City, Utah	69	44	2	1
Evansville, Ind.	71	55	1	6	Tucson, Ariz.	102	61	5	12
Fort Wayne, Ind.	39	26	—	3	PACIFIC	2,015	1,318	56	144
Gary, Ind.	28	10	2	3	Berkeley, Calif.	26	21	1	5
Grand Rapids, Mich.	55	39	2	4	Fresno, Calif.	64	34	5	7
Indianapolis, Ind.	176	105	4	5	Glendale, Calif.	22	15	—	1
Madison, Wis.	33	16	2	1	Honolulu, Hawaii *	64	38	4	4
Milwaukee, Wis.	164	99	8	4	Long Beach, Calif.	150	105	4	11
Peoria, Ill.	50	37	3	2	Los Angeles, Calif.	628	423	17	39
Rockford, Ill.	61	39	4	8	Oakland, Calif.	110	82	2	14
South Bend, Ind.	51	35	1	6	Pasadena, Calif.	56	45	—	5
Toledo, Ohio	106	74	3	6	Portland, Oreg.	166	104	3	4
Youngstown, Ohio	72	48	1	2	Sacramento, Calif.	91	58	3	6
WEST NORTH CENTRAL	981	635	30	55	San Diego, Calif.	81	45	5	6
Des Moines, Iowa	51	36	2	—	San Francisco, Calif.	211	141	2	18
Duluth, Minn.	29	21	—	3	San Jose, Calif.	51	27	—	1
Kansas City, Kans.	36	19	—	—	Seattle, Wash.	177	101	8	11
Kansas City, Mo.	165	105	3	7	Spokane, Wash.	81	58	1	10
Lincoln, Nebr.	42	29	1	3	Tacoma, Wash.	37	21	1	2
Minneapolis, Minn.	92	63	3	3	Total	14,486	8,784	456	909
Omaha, Nebr.	95	65	6	6	Expected Number	13,644	8,032	557	588
St. Louis, Mo.	282	174	10	17	Cumulative Total includes reported corrections for previous weeks	59,660	36,169	2,025	3,313
St. Paul, Minn.	85	57	4	5					
Wichita, Kans.	104	66	1	11					

\*Estimate based on average percent of divisional total.

## EPIDEMIC RINGWORM - Continued

of Tinactin\* was effective in controlling spread of infection and transmission to others.

Epidemiologic investigation revealed that the 1st 3 cases occurred in children of the same family who formerly had 16 cats. Fifteen of the 16 had clinical ringworm with typical areas of alopecia about the head and neck region. The cats were destroyed on the recommendation of the family physician and veterinarian before the investigation.

Another family, whose 3 children (2 of whom were positive for *M. canis* in the school survey) had skin lesions, had acquired a kitten in late August 1972. This kitten was

also disposed of prior to the investigation. The other children who were culture-positive had 2 cats and 1 dog at home; 1 cat had typical ringworm lesions (not cultured) that developed after this child and another sibling became infected, suggesting the possibility of person-to-cat transmission.

The extensive person-to-person transmission in the school was thought to have resulted from gymnasium activities followed by showers. After showering, the pupils were reported to share towels, further increasing the exposure potential. These gymnasium activities were discontinued temporarily as a control measure.

(Reported by Arlene Fudge, R.N., Greenwood School Nurse; Glen Knosp, M.D., private practitioner, Elmwood, Nebraska; Henry E. McConnell, Dr.P.H., Director, Nebraska State Health Department Laboratories; and a CDC staff epidemiologist.)

\*Inclusion of trade names does not imply endorsement by the Public Health Service or the U.S. Department of Health, Education, and Welfare.

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In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

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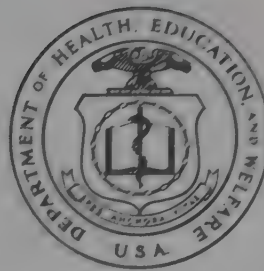
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# Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

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## CURRENT TRENDS

### INFLUENZA — Worldwide, United States

#### WORLDWIDE

**Canada:** Since January 10, there has been an outbreak of influenza-like illness in the general population of Montreal. In general, the disease is clinically mild. Seven strains of virus A antigenically close to A/England/42/72 have been isolated.

**France:** Although an increased incidence of influenza cases associated with virus A is still being reported from many parts of the country, a decrease has been observed in some areas, particularly Paris and Lyon.

**Germany:** Since mid-December, there has been an increase in the incidence of influenza-like illness with local outbreaks throughout the country. Clinically, the disease is generally mild. Some 52 strains of virus A, most of them antigenically close to A/England/42/72, have been isolated, and serologic evidence of infection with virus A has been obtained in more than 500 patients in all parts of the country.

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**Hungary:** The incidence of cases of influenza-like disease has now reached epidemic levels and is rapidly increasing in the whole of the country. In the week ending January 20, 270,000 new cases were reported. Since the beginning of the epidemic, 79 strains of virus A antigenically close to A/England/42/72 have been isolated.

**Switzerland:** The weekly incidence of cases of influenza-like illness has reached epidemic levels. A total of 5,265 cases were

(Text continued on page 40)

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	5th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 5 WEEKS		
	February 3, 1973	February 5, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis . . . . .	36	29	32	208	176	161
Brucellosis . . . . .	2	2	2	9	12	7
Chickenpox . . . . .	4,637	3,867	— — —	21,568	15,542	— — —
Diphtheria . . . . .	2	—	3	10	6	11
Encephalitis, primary:						
Arthropod-borne and unspecified . . . . .	19	14	19	67	72	98
Encephalitis, post-infectious . . . . .	3	4	6	13	21	32
Hepatitis, serum (Hepatitis B) . . . . .	152	182	113	668	902	608
Hepatitis, infectious (Hepatitis A) . . . . .	994	1,011	1,011	4,671	5,327	5,327
Malaria . . . . .	4	16	51	11	206	243
Measles (rubeola) . . . . .	664	790	790	2,773	3,189	3,189
Meningococcal infections, total . . . . .	25	34	64	136	166	310
Civilian . . . . .	25	34	61	128	159	295
Military . . . . .	—	—	3	8	7	15
Mumps . . . . .	1,888	2,364	2,762	8,189	10,398	12,111
Rubella (German measles) . . . . .	500	550	773	1,829	2,274	2,691
Tetanus . . . . .	1	1	1	5	2	5
Tuberculosis, new active . . . . .	638	618	— — —	2,573	2,538	— — —
Tularemia . . . . .	—	1	2	8	9	9
Typhoid fever . . . . .	5	4	4	17	21	22
Typhus, tick-borne (Rky. Mt. spotted fever) . . . . .	—	1	1	2	9	2
Venereal Diseases:						
Gonorrhea . . . . .	15,185	13,109	— — —	71,580	63,497	— — —
Syphilis, primary and secondary . . . . .	525	473	— — —	2,591	2,091	— — —
Rabies in animals . . . . .	42	72	66	251	315	315

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax: . . . . .	—	Poliomyelitis, total: . . . . .	—
Botulism: . . . . .	—	Paralytic: . . . . .	—
Congenital rubella syndrome: *Neb. — 1 . . . . .	2	Psittacosis: . . . . .	1
Leprosy: Calif. — 1, Hawaii — 1 . . . . .	3	Rabies in man: . . . . .	—
Leptospirosis: . . . . .	5	Trichinosis: Tex. — 1 . . . . .	5
Plague: . . . . .	—	Typhus, murine: . . . . .	—

\*Delayed reports: Congenital rubella syndrome: (1972) Utah 1

Figure 1  
PNEUMONIA-INFLUENZA DEATHS IN 122 UNITED STATES CITIES

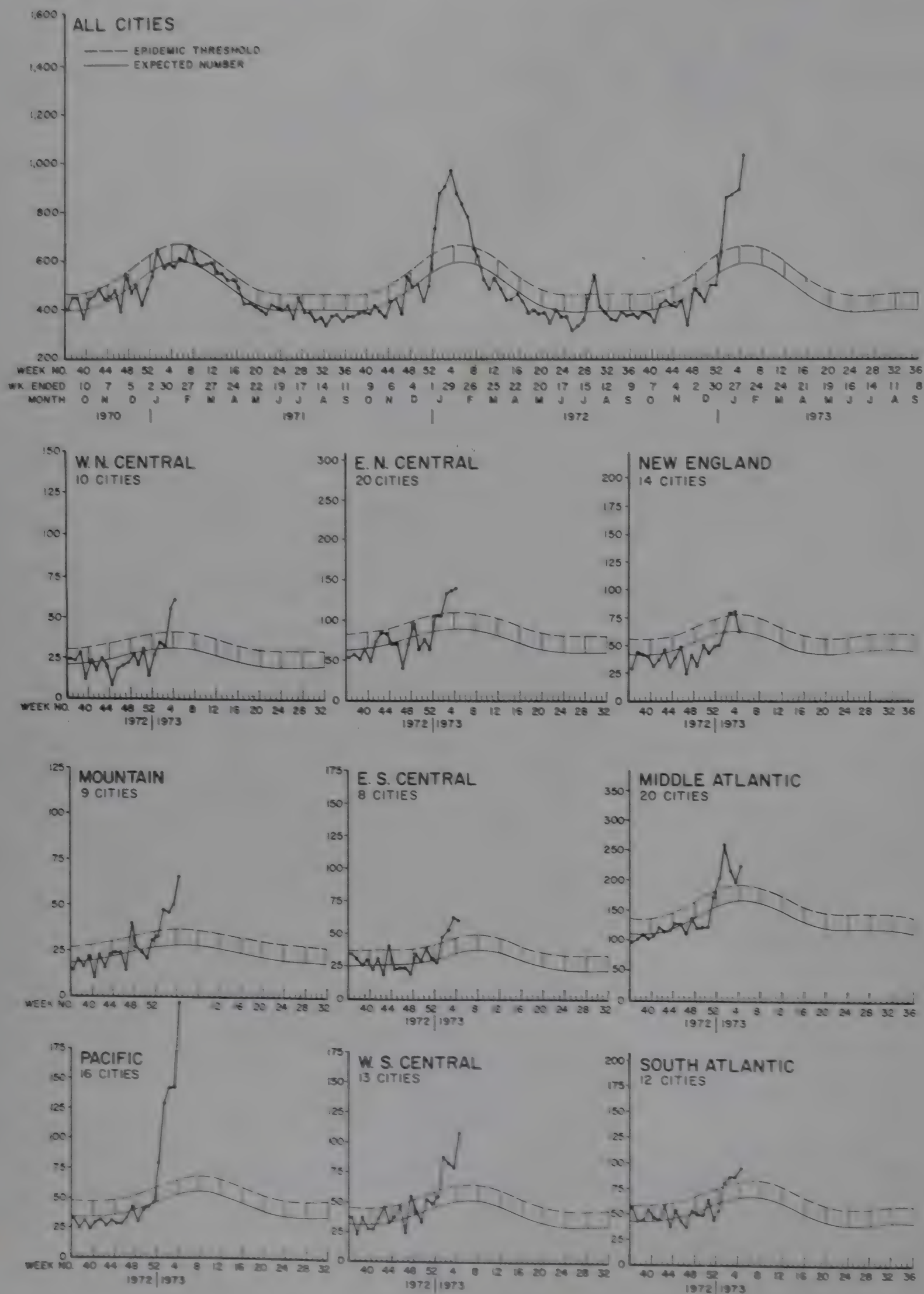
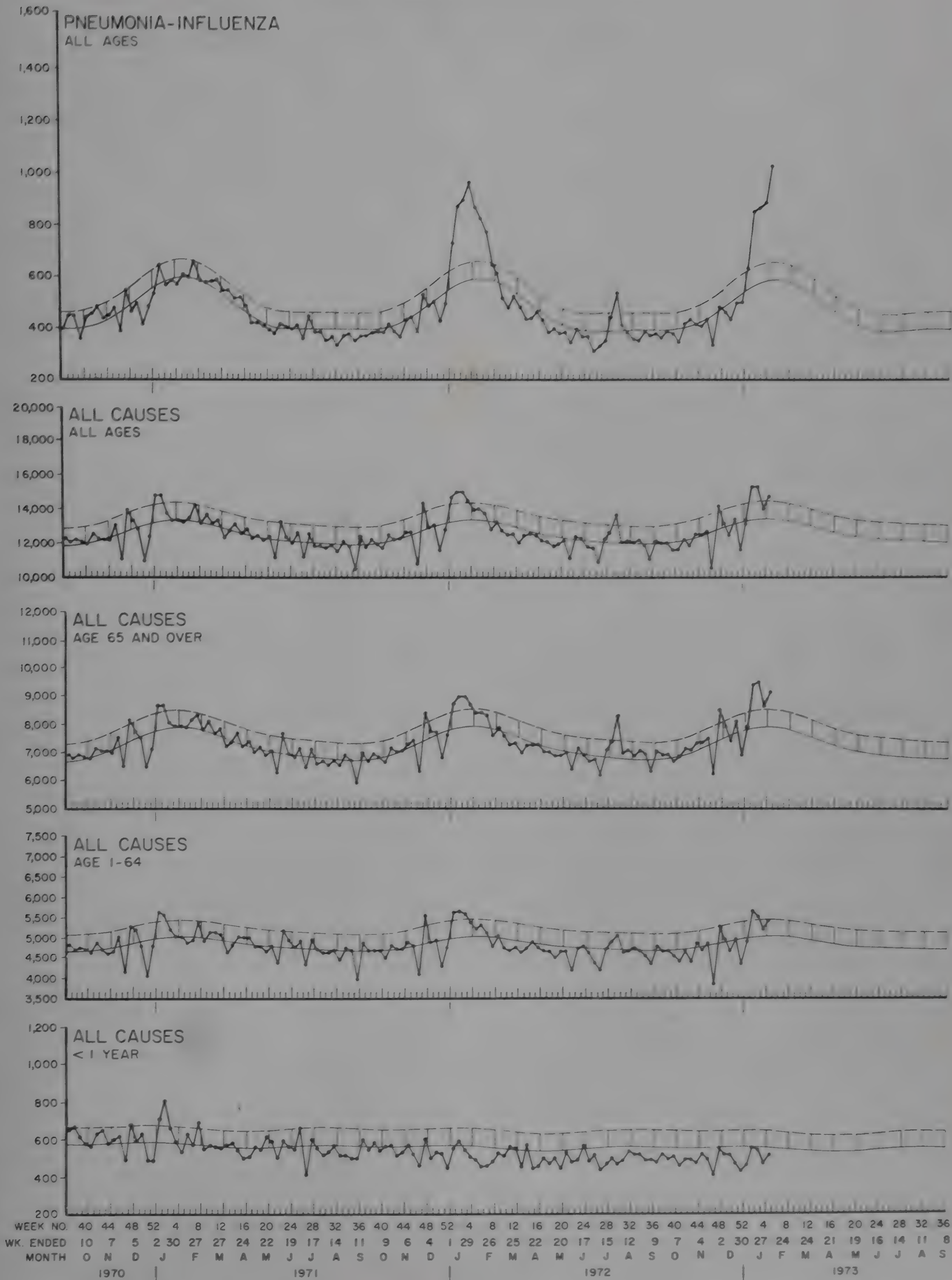


Figure 2  
MORTALITY IN 122 UNITED STATES CITIES



## INFLUENZA - Continued

reported for the week ending January 27, compared with 4,450 for the previous week. Cases were reported from all cantons except 2. Eight strains of virus A, antigenically closely related to A/England/42/72, were isolated by laboratories in St-Gall and Zürich, bringing the total number of strains isolated in Switzerland to 20.

(Reported by the World Health Organization: Weekly Epidemiological Record, Vol. 48, No. 5, Feb. 2, 1973.)

## UNITED STATES

**California:** Influenza reached a plateau in northern California in late December and appears to have peaked in southern California in the week ending January 14. Pneumonia-influenza mortality continued to be significantly above the epidemic threshold for the entire state. The severity of the outbreak in California may be related to the relatively limited outbreaks which have occurred there in the past 3 years. (Reported by James Chin, M.D., State Epidemiologist, California State Department of Public Health.)

**Ohio:** In the past 4 weeks, 6 isolations of influenza A have been reported from Cleveland, 11 from Cincinnati, and 8 from Columbus. All 3 cities have reported increased school absenteeism. In addition, many counties have reported increased school absenteeism, although industrial absenteeism has been relatively low.

(Reported by George Nankervis, M.D., Ph.D., Director, Viral Diagnostic Laboratory, Cleveland Metropolitan Hospital; Cal-

vin Linnemann, Jr., M.D., Assistant Professor of Medicine, and Gilbert M. Schiff, M.D., Professor of Medicine, and Director, Infectious Disease Division, University of Cincinnati College of Medicine; Howard Stegmiller, Chief Virologist, Ohio Department of Health Laboratories, and John H. Ackerman, M.D., Deputy Director, Ohio Department of Health.)

**Pennsylvania:** Influenza appears to be widespread in the Pittsburgh metropolitan area where increased school and industrial absenteeism and isolated school closings have been reported. Between December 25 and January 25, 106 cases of influenza were recorded in a 400-bed nursing home in the city. Isolated influenza outbreaks have occurred elsewhere in the state. (Reported by Fred Rubin, M.D., Assistant Professor of Medicine, University of Pittsburgh; Eleanor J. Streiff, R.N., Director, Supported Services, and Frank Johnston, Public Health Representative, Allegheny County Health Department; W. D. Schrack, Jr., M.D., Director, Division of Communicable Diseases and State Epidemiologist, Pennsylvania Department of Health; and an EIS Officer.)

## Editorial Note

Although influenza case reporting continues throughout the country, most regions are reporting a decrease in morbidity. However, pneumonia and influenza mortality reported to CDC from 122 cities continues to rise above the epidemic threshold (Figures 1 and 2), reflecting the usually observed 2- to 4-week lag in mortality data behind reported morbidity.

### SURVEILLANCE SUMMARY

#### LEGAL ABORTIONS - United States, 1971

In the United States in 1971, slightly more than 480,000 legal abortions were reported to CDC from 24 states plus the District of Columbia. Nationally, the abortion ratio increased from 48 per 1,000 live births in 1970 to 136 per 1,000 live births in 1971.

For all areas reporting abortions in 1971, the total legal abortion ratio by state of occurrence was 268 per 1,000 live births, a 2-fold increase over the ratio of 126 per 1,000 live births reported in 1970. All areas that reported for both years, except Oregon, experienced increases in both the number of reported abortions and the abortion ratio. In 1971, 79.4% of the total number of reported abortions were performed in 2 states, New York (55.0%) and California (24.3%). The 2 areas with the highest ratios reported by place of occurrence were New York State (927) and the District of Columbia (703).

In 1971, 38.7% (186,058) of reported legal abortions were performed outside the woman's state of residence, compared with 29.8% from July through December 1970, but the exact state of residence for women having these abortions was known for only 158,406 (Table 1). Of all abortions reported on out-of-state residents in 1971, 85.3% were performed in New York State.

Fifteen states reported ages of women undergoing legal abortions by state of occurrence. Approximately 1/3 of the women were in the teen age group, 1/3 were in the 20- to 24-year age group, and the remaining 1/3 were 25 years of age or older. The median age was 23.1 years.

Twelve states reported data by race and by state of occurrence; 79.2% of the legal abortions were performed on whites and 18.9% on black and other races. In 1971, in only 4 of the 12 states was the abortion ratio for whites greater than that for black and other races. By contrast, in 1970, in 4 of 6 states reporting abortions by race, the abortion ratio was higher for whites than for black and other races. The total ratios for whites (368) and for black and other races (355) were approximately the same in 1971, suggesting that pregnant white women were about as likely to undergo a legal abortion as pregnant women of other races.

Data from 13 states show that 78.2% of abortions were performed on women with pregnancies of less than 13 weeks gestation. For 6 states - Georgia, Hawaii, Maryland, New York, Oregon, and South Carolina - gestation data were available for both 1970 and 1971; for the 6 states combined, the proportion of 1st trimester abortions increased from 75.6% in 1970 to 78.4% in 1971.

(Reported by the Family Planning Evaluation Branch, Epidemiology Program, CDC.)

A copy of the original report from which these data were derived is available on request from  
Center for Disease Control  
Attn: Chief, Family Planning Evaluation Branch  
Epidemiology Program  
Atlanta, Georgia 30333

Table 1  
Reported Legal Abortions, by State of Residence — 1971

States by Region	Abortions Performed Within State of Residence		Abortions Performed Outside State of Residence		Total
	Number	Percent	Number	Percent	
<b>New England</b>	3,757	14.4	22,332	85.6	26,089
Maine	NR <sup>1</sup>	—	1,345	100.0	1,345
New Hampshire	NR	—	1,243	100.0	1,243
Vermont	9	1.2	757	98.8	766
Massachusetts <sup>2</sup>	3,024 <sup>3</sup>	22.9	10,206 <sup>4</sup>	77.1	13,230
Rhode Island	NR	—	1,697	100.0	1,697
Connecticut	724 <sup>3</sup>	9.3	7,084	90.7	7,808
<b>Middle Atlantic</b>	112,152	76.1	35,127	23.9	147,279
New York	105,635	100.0	7	0.0	105,642
New Jersey	NR	—	21,207	100.0	21,207
Pennsylvania	6,517 <sup>3</sup>	31.9	13,913	68.1	20,430
<b>East North Central</b>	3,145	5.7	51,706	94.3	54,851
Ohio	NR	—	14,209	100.0	14,209
Indiana	NR	—	4,989	100.0	4,989
Illinois	NR	—	15,982	100.0	15,982
Michigan	NR	—	14,361	100.0	14,361
Wisconsin	3,145 <sup>3</sup>	59.2	2,165	40.8	5,310
<b>West North Central</b>	3,709	22.8	12,590	77.2	16,299
Minnesota	NR	—	3,351	100.0	3,351
Iowa	NR	—	2,834	100.0	2,834
Missouri	NR	—	4,582	100.0	4,582
North Dakota	NR	—	252	100.0	252
South Dakota	NR	—	170	100.0	170
Nebraska	NR	—	1,093	100.0	1,093
Kansas	3,709	92.3	308	7.7	4,017
<b>South Atlantic</b>	30,878	57.6	22,715	42.4	53,593
Delaware	1,073	64.4	594	35.6	1,667
Maryland	8,138	81.4	1,863	18.6	10,001
District of Columbia	11,220 <sup>5</sup>	96.6	398	3.4	11,618
Virginia	3,763	53.8	3,232	46.2	6,995
West Virginia	NR	—	896	100.0	896
North Carolina	4,378	71.2	1,769	28.8	6,147
South Carolina	727	35.6	1,318	64.4	2,045
Georgia	1,579	31.6	3,410	68.4	4,989
Florida	NR	—	9,235	100.0	9,235
<b>East South Central</b>	542	7.9	6,353	92.1	6,895
Kentucky	NR	—	2,268	100.0	2,268
Tennessee	NR	—	2,782	100.0	2,782
Alabama	494 <sup>3</sup>	32.9	1,007	67.1	1,501
Mississippi <sup>6</sup>	48	14.0	296	86.0	344
<b>West South Central</b>	637	10.2	5,623	89.8	6,260
Arkansas	637	60.0	424	40.0	1,061
Louisiana	NR	—	1,135	100.0	1,135
Oklahoma	NR	—	1,506	100.0	1,506
Texas	NR	—	2,558	100.0	2,558
<b>Mountain</b>	9,106	85.3	1,565	14.7	10,671
Montana	NR	—	420	100.0	420
Idaho	NR	—	29	100.0	29
Wyoming	NR	—	190	100.0	190
Colorado	3,843	83.7	746	16.3	4,589
New Mexico	4,883 <sup>3</sup>	98.9	53	1.1	4,936
Arizona <sup>6</sup>	380 <sup>3</sup>	91.3	36	8.7	416
Utah	NR	—	51	100.0	51
Nevada	NR	—	40	100.0	40
<b>Pacific</b>	130,275	99.7	395	0.3	130,670
Washington	14,347	99.5	78	0.5	14,425
Oregon	6,984	99.8	14	0.2	6,998
California	103,678	99.8	251	0.2	103,929
Alaska	1,145	96.1	46	3.9	1,191
Hawaii	4,121	99.9	6	0.1	4,127
<b>Total</b>	294,201	65.0	158,406	35.0	452,607

1. Not reported

2. October 1970-September 1971

3. Reports from one or more hospitals in state

4. October 1970-September 1973 estimated

5. Of the 8 hospitals reporting data, 5 did not identify nonresidents.

6. January-June 1971

SURVEILLANCE SUMMARY  
MEASLES — United States, 1st 4 Weeks, 1973

In the 1st 4 weeks of 1973, 2,107 cases of measles were reported to CDC, representing a decrease of 12.2% for the comparable period in 1972. However, 13 states and Puerto Rico reported an increased number of cases compared with last year's total for the same period (Figure 3). The New England region accounted for 40.2% of the 2,107 cases reported (Massachusetts — 21.0%, Connecticut — 11.3%, New Hampshire — 5.9%, Rhode Island — 1.2%, Vermont — 0.7%, and Maine — <0.1%); this total number of cases reported in the 1st 4 weeks of 1973 is greater than that reported for the same 4-week period in any of the past 7 years (Figure 4). (Reported by the Field Services Branch, Epidemiology Program, and the Immunization Branch, State and Community Services Division, CDC.)

#### Editorial Note

Recently investigated outbreaks continue to demonstrate that the large number of reported measles cases have resulted from pools of susceptible children. Epidemiologic investigations have documented vaccine efficacies of over 90%, and vaccine failures have primarily been attributed to unsuccessful vaccination.

Figure 4  
REPORTED MEASLES CASES, BY 4-WEEK PERIODS  
NEW ENGLAND — 1970-1973

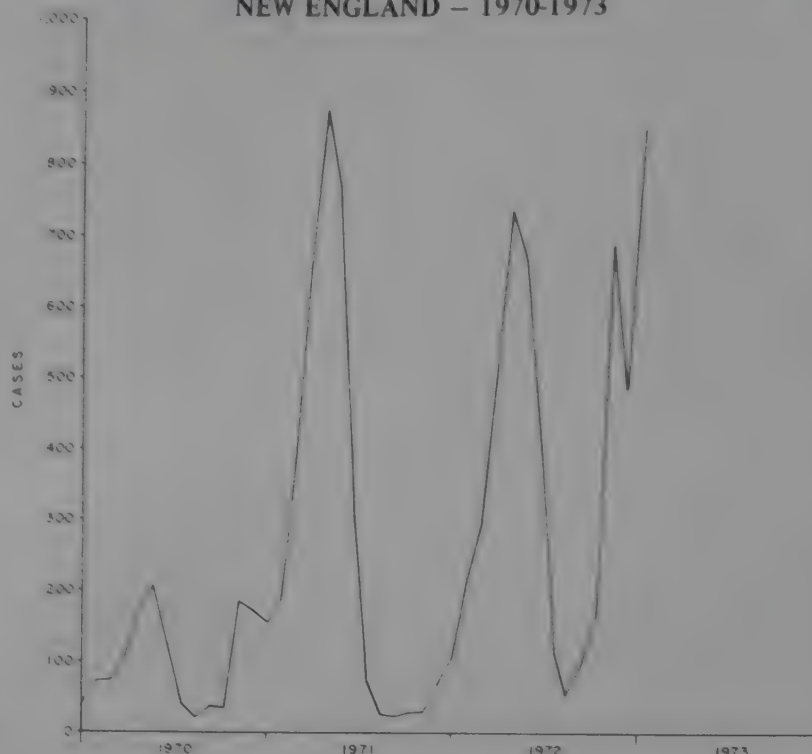
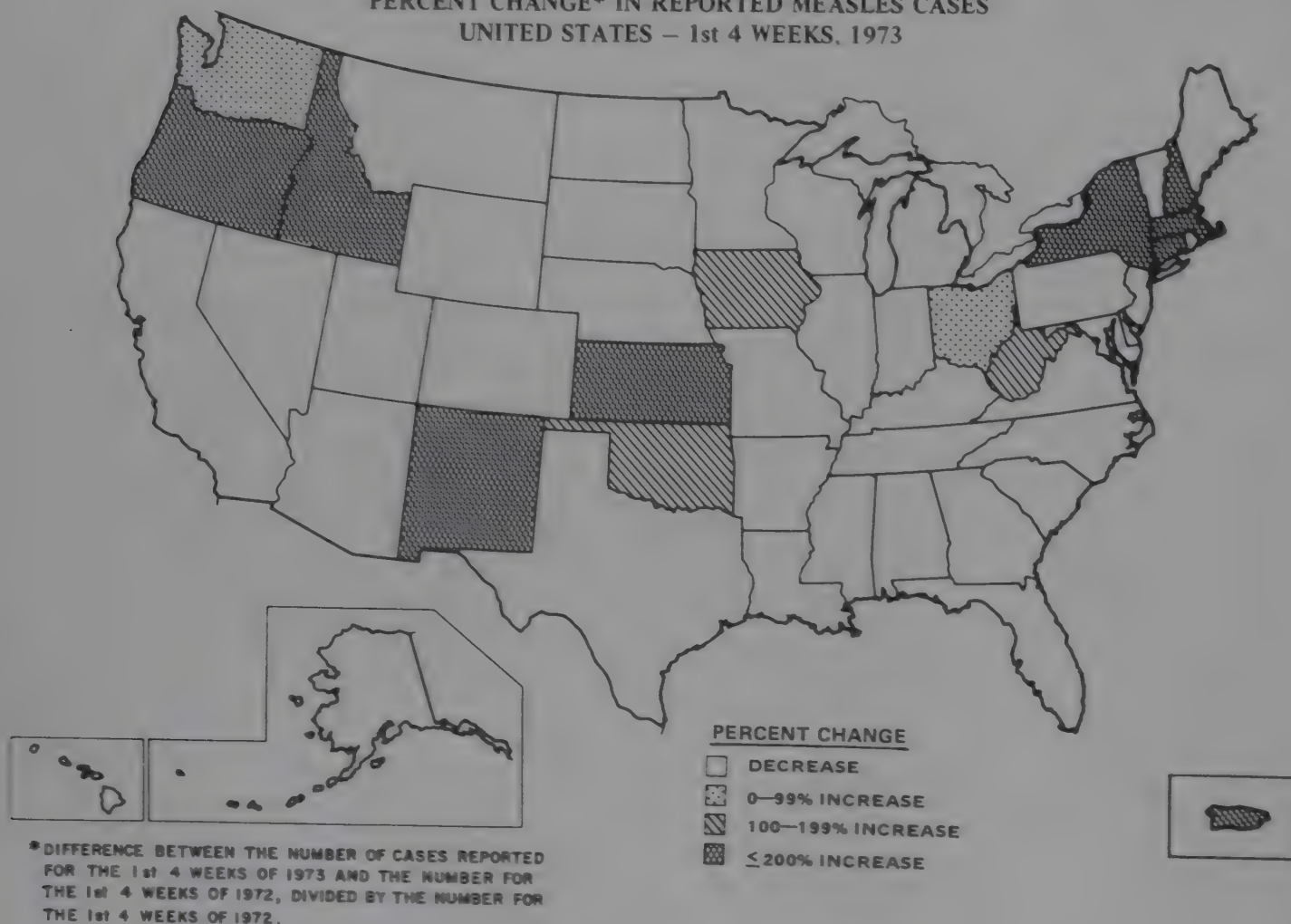


Figure 3  
PERCENT CHANGE\* IN REPORTED MEASLES CASES  
UNITED STATES — 1st 4 WEEKS, 1973



#### CALIFORNIA ENCEPHALITIS — Wisconsin

Between July and October 1972, 23 cases of California encephalitis were reported from Wisconsin; annual totals of 30 and 19 were reported in 1970 and 1971, respectively. The 23 cases were confirmed serologically by a 4-fold or greater

rise in hemagglutination inhibition, neutralization, or complement fixation antibodies between acute and convalescent sera. In addition, 5 presumptive cases are being studied.

Comparative neutralization tests using sera from the 23

cases and antigens to 4 California group viruses (La Crosse, Snowshoe Hare, Jamestown Canyon, and Trivittatus) showed that neutralization titers were highest with the La Crosse virus.

The 23 patients ranged in age from 2 to 14 years, and 16 were males. Both age and sex distribution were similar to that reported in previous years.

Seventeen of the 23 patients lived in southwestern Wisconsin, 5 in southeastern Minnesota, and 1 in northeastern Iowa. All patients were hospitalized in southwestern Wisconsin. Most patients lived in rural or suburban areas; 2 lived in metropolitan La Crosse, but each was exposed to mosquitoes in nearby forests.

La Crosse arbovirus activity was detected in hardwood

forests where chipmunks, squirrels, and sentinel rabbits acquired low levels of antibodies in late June and early July, when the weather was cool and dry. In contrast August and September were warm and unusually wet months, and the rise in mosquito populations resulted in increased arbovirus activity. Most isolates of La Crosse virus in the state were from forest-dwelling *Aedes triseriatus* mosquitoes.

(Reported by Dr. Cameron B. Gundersen, Gundersen Clinic, La Crosse; Dr. Wayne H. Thompson, Department of Preventive Medicine, University of Wisconsin; Donald Nelson, Chief, Virus Diagnostic Section, and Dr. Stanley L. Inhorn, Director, State Laboratory of Hygiene, and H. Grant Skinner, M.D., State Epidemiologist, Wisconsin Department of Health and Social Services, Division of Health.)

### LEPTOSPIROSIS — United States, 1971

In 1971, 68 cases of human leptospirosis were reported by 17 states, and 2 common-source outbreaks in Minnesota and Texas accounted for 22 (32%) of the cases. Leptospirosis was the reported cause of death in 3 of the 68 patients (4%), and 52 (76%) were hospitalized. The most frequently observed symptoms were fever, headache, and myalgia.

Fifty-nine percent of the 1971 cases occurred in persons 19 years of age or younger, in contrast to 30% for the period 1965-1970. As in previous years, the majority of cases (76%) occurred in males.

The seasonal incidence of leptospirosis was more apparent in 1971 than in previous years with 69% of the cases occurring in the period July-October (Figure 5). The high proportion of cases reported in these months was largely attributable to 2 common-source outbreaks in July and August 1971.

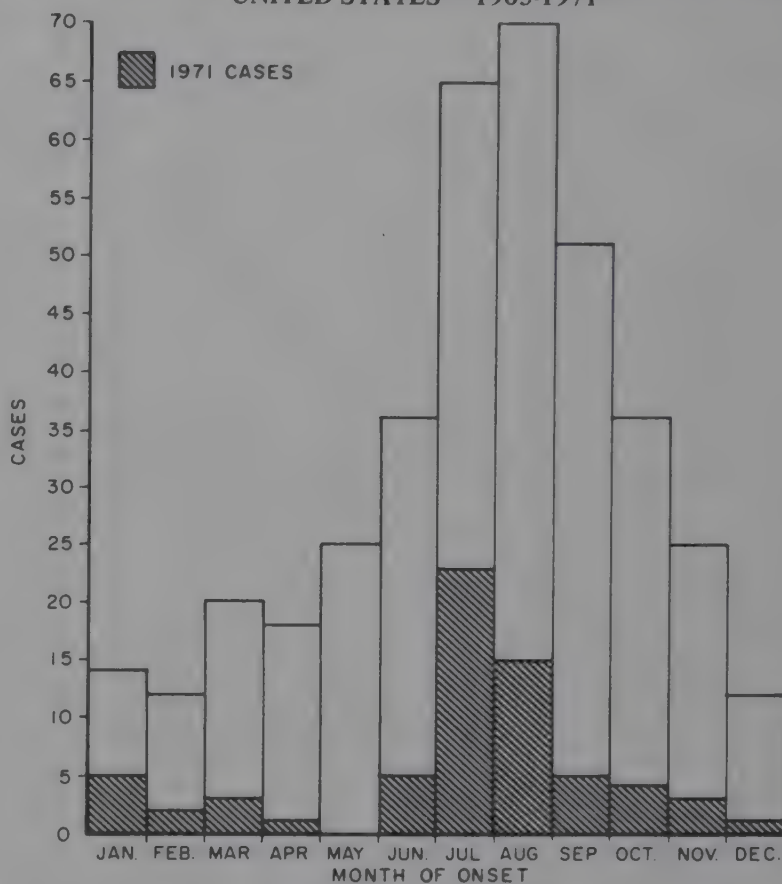
The occupation of 60 patients was reported in 1971: 40 were children, students, and housewives, and 10 were employed where animal contact could be considered a significant factor. The remaining 10 patients had diverse occupations where animal contact was minimal.

Of 41 cases for which a probable source was reported, 26 (63%) were associated with dogs, compared with 32% for the period 1966-1970. Swine or cattle were implicated in 6 cases, rodents in 6, and wildlife in 3.

Canicola infections accounted for 23 of the 64 cases (36%) for which the presumptive infecting serogroup was reported in 1971. Icterohaemorrhagiae infections accounted for 10 (16%), and Pomona for 8 (13%). Other infecting serogroups were Autumnalis, Ballum, and Grippotyphosa.

(Reported by the Bacterial Zoonoses Section, Bacterial Diseases Branch, Epidemiology Program, CDC.)

Figure 5  
384 CASES OF HUMAN LEPTOSPIROSIS, BY MONTH OF ONSET  
UNITED STATES — 1965-1971



A copy of the original report from which these data were derived is available on request from

Center for Disease Control  
Attn: Bacterial Zoonoses Section  
Bacterial Diseases Branch  
Epidemiology Program  
Atlanta, Georgia 30333

### EPIDEMIOLOGIC NOTES AND REPORTS HEAD CHEESE-ASSOCIATED SALMONELLOSIS — New Jersey

On Oct. 11, 1972, a couple in Trenton, New Jersey, developed chills, fever, sweats, vomiting, cramps, and diarrhea approximately 11 hours after eating head cheese. Stool specimens from the wife were positive for *Salmonella agona* and *S. anatum*. Stool cultures from the husband were also positive for these 2 serotypes and for *S. tennessee*. In addition, a stool specimen from their asymptomatic infant son was positive for *S. agona* and *S. anatum*, and a sample of the remaining head cheese also yielded these 2 serotypes.

Publicity concerning this incident was followed by reports from 2 other persons who also became ill after eating head cheese. A stool culture from 1 was positive for *S. agona*, and stool specimens from the other yielded *S. agona*, *S. infantis*, and *S. tennessee*.

The head cheese was produced by a New Jersey meat products company that distributed its goods to 5 retail outlets within the state. Samples of the head cheese and other

(Continued on page 48)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING FEBRUARY 3, 1973 AND FEBRUARY 5, 1972 (5th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCE- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES	36	2	4,637	2	10	19	14	3	152	994	1,011
NEW ENGLAND	-	-	500	-	2	1	1	-	5	62	60
Maine *	-	-	8	-	-	-	-	-	-	2	3
New Hampshire	-	-	10	-	-	-	-	-	-	6	7
Vermont	-	-	11	-	-	-	-	-	-	5	3
Massachusetts	-	-	204	-	-	1	-	-	-	32	25
Rhode Island	-	-	53	-	2	-	1	-	2	9	6
Connecticut	-	-	214	-	-	-	-	-	3	8	16
MIDDLE ATLANTIC	5	-	105	-	-	3	-	1	43	142	133
Upstate New York	3	-	3	-	-	1	-	-	2	19	34
New York City	-	-	90	-	-	1	-	-	12	22	38
New Jersey	2	-	NN	-	-	-	-	-	12	41	48
Pennsylvania *	-	-	12	-	-	1	-	1	17	60	13
EAST NORTH CENTRAL	8	-	1,920	1	1	6	2	1	28	158	151
Ohio *	2	-	431	1	1	3	-	-	5	54	29
Indiana	1	-	195	-	-	-	-	-	-	6	12
Illinois	-	-	-	-	-	-	2	1	1	23	31
Michigan	5	-	545	-	-	3	-	-	18	75	74
Wisconsin	-	-	749	-	-	-	-	-	4	-	5
WEST NORTH CENTRAL	1	-	684	-	2	1	1	-	1	48	41
Minnesota *	-	-	36	-	-	-	-	-	-	5	3
Iowa	1	-	390	-	-	-	-	-	1	6	3
Missouri *	-	-	17	-	-	-	-	-	-	17	14
North Dakota	-	-	43	-	-	-	-	-	-	1	2
South Dakota	-	-	4	-	2	-	-	-	-	4	3
Nebraska	-	-	64	-	-	-	-	-	-	1	2
Kansas	-	-	130	-	-	1	1	-	-	14	14
SOUTH ATLANTIC	16	-	510	-	-	3	2	-	14	158	162
Delaware	-	-	27	-	-	-	-	-	-	1	2
Maryland	1	-	16	-	-	-	-	-	1	13	21
District of Columbia	-	-	2	-	-	-	-	-	-	-	3
Virginia	-	-	111	-	-	-	-	-	2	22	14
West Virginia	-	-	316	-	-	-	-	-	-	10	9
North Carolina	-	-	NN	-	-	-	-	-	4	31	43
South Carolina	-	-	31	-	-	-	-	-	-	8	13
Georgia *	-	-	7	-	-	-	-	-	-	11	19
Florida	15	-	-	-	-	3	2	-	7	62	38
EAST SOUTH CENTRAL	-	-	163	-	-	-	4	-	10	90	63
Kentucky	-	-	148	-	-	-	-	-	-	25	20
Tennessee	-	-	NN	-	-	-	1	-	1	39	27
Alabama	-	-	12	-	-	-	3	-	9	21	5
Mississippi	-	-	3	-	-	-	-	-	-	5	11
WEST SOUTH CENTRAL	1	2	335	-	-	2	-	-	-	116	110
Arkansas *	-	-	5	-	-	-	-	-	-	4	5
Louisiana	-	1	NN	-	-	2	-	-	-	8	7
Oklahoma	-	-	7	-	-	-	-	-	-	12	16
Texas	1	1	323	-	-	-	-	-	-	92	82
MOUNTAIN	-	-	160	-	-	1	-	-	2	43	44
Montana	-	-	10	-	-	1	-	-	-	8	2
Idaho	-	-	-	-	-	-	-	-	-	3	8
Wyoming	-	-	103	-	-	-	-	-	1	1	1
Colorado	-	-	20	-	-	-	-	-	1	10	7
New Mexico	-	-	6	-	-	-	-	-	-	2	1
Arizona	-	-	21	-	-	-	-	-	-	13	19
Utah	-	-	-	-	-	-	-	-	-	4	5
Nevada	-	-	-	-	-	-	-	-	-	2	1
PACIFIC	5	-	260	1	5	2	4	1	49	177	247
Washington	-	-	208	-	4	-	-	-	-	-	37
Oregon	-	-	-	-	-	-	-	-	4	41	18
California	5	-	-	1	1	2	4	1	45	131	184
Alaska *	-	-	16	-	-	-	-	-	-	1	1
Hawaii	-	-	36	-	-	-	-	-	-	4	7
Guam *	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	-	-	13	-	-	-	-	-	-	8	7
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: (1972) Minn. 1, (1973) Guam 1

Chickenpox: (1972) Mo. 127, Ga. 2, Ark. 200, (1973) Me. 130, Guam 6

Encephalitis, primary: (1972) Pa. 1

Hepatitis B: (1972) Alaska 1, (1973) Guam 1

Hepatitis A: (1972) Ohio delete 1, Mo. 8, Ga. 13, Alaska 10,  
(1973) Me. 7, Ohio delete 1, Ark. 16, Guam 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING FEBRUARY 3, 1973 AND FEBRUARY 5, 1972 (5th WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS. TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES . . . . .	4	11	664	2,773	3,189	25	136	166	1,888	8,189	500	1,829
NEW ENGLAND . . . . .	—	—	266	1,113	129	3	9	4	56	335	56	186
Maine * . . . . .	—	—	—	2	16	—	—	1	1	12	6	8
New Hampshire . . . . .	—	—	74	199	8	—	1	—	8	20	—	3
Vermont . . . . .	—	—	—	14	34	—	—	—	—	55	—	5
Massachusetts . . . . .	—	—	122	564	6	1	4	—	34	142	29	85
Rhode Island . . . . .	—	—	34	60	30	—	—	3	—	25	1	4
Connecticut . . . . .	—	—	36	274	35	2	4	—	13	81	20	81
MIDDLE ATLANTIC . . . . .	—	2	33	204	287	2	22	11	151	719	45	194
Upstate New York . . . . .	—	1	2	22	9	1	7	3	NN	NN	3	27
New York City . . . . .	—	—	18	125	36	—	6	1	114	433	8	19
New Jersey . . . . .	—	—	11	44	232	—	4	4	18	154	34	134
Pennsylvania . . . . .	—	1	2	13	10	1	5	3	19	132	—	14
EAST NORTH CENTRAL . . . . .	—	1	187	750	1,424	3	12	21	611	2,503	131	433
Ohio * . . . . .	—	—	14	38	38	3	10	9	89	284	19	58
Indiana . . . . .	—	—	3	66	420	—	—	2	49	210	27	102
Illinois . . . . .	—	—	54	273	351	—	1	3	104	441	15	56
Michigan . . . . .	—	1	81	230	218	—	1	6	144	770	24	91
Wisconsin . . . . .	—	—	35	143	397	—	—	1	225	798	46	126
WEST NORTH CENTRAL . . . . .	—	—	21	88	100	3	11	12	183	627	42	219
Minnesota . . . . .	—	—	1	4	3	—	—	—	4	17	6	10
Iowa . . . . .	—	—	13	70	71	—	3	—	106	434	4	43
Missouri * . . . . .	—	—	—	3	15	2	5	2	1	63	1	108
North Dakota . . . . .	—	—	2	3	8	—	—	—	5	17	5	18
South Dakota . . . . .	—	—	—	—	1	—	—	1	—	2	—	—
Nebraska . . . . .	—	—	1	1	2	—	—	2	11	24	11	23
Kansas . . . . .	—	—	4	7	—	1	3	7	56	70	15	17
SOUTH ATLANTIC . . . . .	1	4	15	86	344	3	20	41	208	857	16	178
Delaware . . . . .	—	—	1	1	—	—	—	1	12	62	—	—
Maryland . . . . .	—	—	—	—	3	—	7	2	15	130	—	2
District of Columbia . . . . .	—	—	—	1	—	—	1	2	—	4	—	1
Virginia . . . . .	1	3	—	7	—	—	3	12	12	60	2	3
West Virginia . . . . .	—	—	1	22	13	—	—	4	59	322	6	26
North Carolina . . . . .	—	1	1	3	13	1	5	7	NN	NN	—	4
South Carolina . . . . .	—	—	5	7	45	1	2	7	18	29	—	3
Georgia * . . . . .	—	—	—	1	20	—	—	—	4	4	1	3
Florida . . . . .	—	—	7	44	250	1	1	6	88	246	7	136
EAST SOUTH CENTRAL . . . . .	1	1	38	84	178	1	12	12	101	421	27	82
Kentucky . . . . .	—	—	3	15	89	—	4	5	35	103	1	25
Tennessee . . . . .	—	—	31	51	22	1	5	3	52	222	23	45
Alabama . . . . .	1	1	—	—	44	—	2	3	13	85	3	7
Mississippi . . . . .	—	—	4	18	23	—	1	1	1	11	—	5
WEST SOUTH CENTRAL . . . . .	1	1	29	120	144	2	13	22	124	623	32	128
Arkansas * . . . . .	—	—	2	4	3	—	1	3	1	15	2	7
Louisiana . . . . .	—	—	7	7	6	—	1	6	—	2	—	—
Oklahoma . . . . .	—	—	—	4	2	—	2	—	4	17	3	6
Texas . . . . .	1	1	20	105	133	2	9	13	119	589	27	115
MOUNTAIN . . . . .	—	—	4	59	210	—	7	2	147	516	66	111
Montana . . . . .	—	—	—	1	4	—	—	—	21	38	4	8
Idaho . . . . .	—	—	1	5	3	—	—	—	9	23	—	4
Wyoming . . . . .	—	—	—	—	—	—	—	1	64	141	—	—
Colorado . . . . .	—	—	1	18	124	—	2	—	5	33	23	41
New Mexico . . . . .	—	—	2	29	11	—	1	1	29	165	3	12
Arizona . . . . .	—	—	—	6	45	—	1	—	19	98	1	7
Utah * . . . . .	—	—	—	—	23	—	1	—	—	16	35	38
Nevada . . . . .	—	—	—	—	—	—	2	—	—	2	—	1
PACIFIC . . . . .	1	2	71	269	373	8	30	41	307	1,588	85	298
Washington . . . . .	—	—	44	156	111	1	3	3	39	166	17	55
Oregon . . . . .	—	—	10	52	7	—	2	1	90	356	19	67
California . . . . .	1	2	17	59	242	7	25	37	150	956	48	174
Alaska . . . . .	—	—	—	—	3	—	—	—	19	90	—	—
Hawaii . . . . .	—	—	—	2	10	—	—	—	9	20	1	2
Puerto Rico . . . . .	—	—	20	157	22	—	—	—	21	68	1	4
Virgin Islands . . . . .	—	—	—	—	—	—	—	2	1	1	—	—

Delayed reports: Measles: (1972) Mo. 40, Ark. 34, (1973) Me. 1, Ark. 1  
Meningococcal infections: (1972) Ohio delete 1, Ark. 1

Mumps: (1972) Mo. 33, (1973) Me. 4, Ark. 5  
Rubella: (1972) Mo. 6, Ga. 2, Utah 53

## Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING FEBRUARY 3, 1973 AND FEBRUARY 5, 1972 (5th WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR RHEA	SYPHILIS (Pri & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES	5	638	2,573	8	5	17	-	2	15,185	525	42	251
NEW ENGLAND	-	22	78	-	-	-	-	-	511	10	-	12
Maine	-	-	2	-	-	-	-	-	25	-	-	12
New Hampshire	-	-	1	-	-	-	-	-	15	1	-	-
Vermont *	-	1	2	-	-	-	-	-	8	1	-	-
Massachusetts	-	14	42	-	-	-	-	-	226	6	-	-
Rhode Island	-	-	4	-	-	-	-	-	64	-	-	-
Connecticut *	-	7	27	-	-	-	-	-	173	2	-	-
MIDDLE ATLANTIC	2	153	490	-	-	4	-	1	1,688	114	1	4
Upstate New York	-	28	131	-	-	-	-	-	272	11	1	1
New York City	1	74	167	-	-	4	-	-	783	76	-	-
New Jersey	1	16	90	-	-	-	-	-	177	15	-	-
Pennsylvania	-	35	102	-	-	-	-	1	456	12	-	3
EAST NORTH CENTRAL	-	100	420	-	-	1	-	-	2,192	28	3	16
Ohio *	-	36	174	-	-	-	-	-	816	6	-	-
Indiana	-	11	38	-	-	-	-	-	278	5	-	2
Illinois	-	17	93	-	-	-	-	-	257	1	-	4
Michigan	-	31	64	-	-	1	-	-	643	12	-	-
Wisconsin	-	5	51	-	-	-	-	-	198	4	3	10
WEST NORTH CENTRAL	1	21	79	1	-	-	-	-	891	3	18	82
Minnesota *	-	1	2	-	-	-	-	-	141	-	8	24
Iowa	-	2	12	-	-	-	-	-	-	-	7	31
Missouri	1	8	40	1	-	-	-	-	453	-	-	8
North Dakota	-	4	4	-	-	-	-	-	21	-	3	16
South Dakota	-	3	9	-	-	-	-	-	47	1	-	3
Nebraska	-	1	4	-	-	-	-	-	118	-	-	-
Kansas	-	2	8	-	-	-	-	-	111	2	-	-
SOUTH ATLANTIC	1	126	547	1	3	4	-	-	4,080	179	4	24
Delaware	-	2	9	-	-	-	-	-	24	4	-	-
Maryland	-	12	53	-	-	-	-	-	428	7	-	-
District of Columbia	-	11	31	-	-	-	-	-	338	18	-	-
Virginia	-	12	77	1	-	-	-	-	242	33	1	11
West Virginia	-	5	22	-	-	-	-	-	37	-	1	4
North Carolina *	-	23	87	-	1	1	-	-	707	8	-	-
South Carolina	-	18	80	-	1	1	-	-	567	31	-	-
Georgia	-	22	85	-	1	1	-	-	590	24	1	4
Florida	1	21	103	-	-	1	-	-	1,147	54	1	5
EAST SOUTH CENTRAL	1	30	196	3	-	1	-	1	1,321	28	11	59
Kentucky	-	11	47	1	-	-	-	-	150	9	2	16
Tennessee	-	-	48	2	-	-	-	-	565	5	5	27
Alabama *	1	11	69	-	-	1	-	1	353	4	4	16
Mississippi	-	8	32	-	-	-	-	-	253	10	-	-
WEST SOUTH CENTRAL	-	87	249	3	-	1	-	-	1,930	42	3	27
Arkansas *	-	9	31	1	-	-	-	-	96	5	2	7
Louisiana *	-	56	67	-	-	-	-	-	349	-	-	2
Oklahoma	-	4	18	2	-	1	-	-	461	1	1	8
Texas	-	18	133	-	-	-	-	-	1,024	36	-	10
MOUNTAIN	-	14	94	-	-	-	-	-	630	16	-	4
Montana	-	2	2	-	-	-	-	-	29	-	-	-
Idaho	-	-	4	-	-	-	-	-	9	-	-	-
Wyoming	-	-	3	-	-	-	-	-	-	-	-	-
Colorado	-	8	9	-	-	-	-	-	-	-	-	-
New Mexico	-	4	19	-	-	-	-	-	214	13	-	-
Arizona *	-	-	54	-	-	-	-	-	130	-	-	-
Utah	-	-	-	-	-	-	-	-	201	3	-	4
Nevada	-	-	3	-	-	-	-	-	36	-	-	-
									11	-	-	-
PACIFIC	-	85	420	-	2	6	-	-	1,942	105	2	23
Washington	-	3	42	-	-	-	-	-	185	-	-	-
Oregon	-	4	16	-	-	-	-	-	149	2	-	-
California	-	71	338	-	2	6	-	-	1,448	94	2	21
Alaska	-	-	-	-	-	-	-	-	114	3	-	2
Hawaii	-	7	24	-	-	-	-	-	46	6	-	-
Guam *	-	-	2	-	-	-	-	-	-	-	-	-
Puerto Rico	-	0	40	-	-	-	-	-	93	25	-	4
Virgin Islands	-	-	-	-	-	-	-	-	2	-	-	-

\*Delayed reports: Tetanus: (1973) Ala. 1

TB: (1972) Va. 1, Minn. 5, N.C. delete 1

(1973) Conn. 19, Ohio delete 1, Minn. delete 1, Guam 1

Tularemia: (1973) Ark. 1

Gonorrhea: (1973) La. delete 2, Guam 12

Rabies: (1973) Ariz. 1

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING FEBRUARY 3, 1973

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
<b>NORTH ATLANTIC</b>	777	504	22	63	<b>SOUTH ATLANTIC</b>	1,361	760	38	95
Boston, Mass.	222	129	7	33	Atlanta, Ga.	193	74	9	17
Bridgeport, Conn.	41	21	1	2	Baltimore, Md.	252	147	6	11
Cambridge, Mass.	25	17	—	5	Charlotte, N. C.	81	40	2	1
Fall River, Mass.	37	29	—	1	Jacksonville, Fla.	135	69	1	4
Hartford, Conn.	72	45	2	3	Miami, Fla.	97	59	3	5
Lowell, Mass.	53	39	3	4	Norfolk, Va.	72	39	1	8
Lynn, Mass.	26	19	—	2	Richmond, Va.	120	67	1	11
New Bedford, Mass.	35	28	—	1	Savannah, Ga.	61	32	4	10
New Haven, Conn.	60	32	3	1	St. Petersburg, Fla.	143	120	1	11
Providence, R. I.	59	39	2	5	Tampa, Fla.	114	64	6	11
Somerville, Mass.	12	10	—	—	Washington, D. C.	68	36	2	6
Springfield, Mass.	41	27	3	2	Wilmington, Del.	25	13	2	—
Waterbury, Conn.	31	18	—	—	<b>EAST SOUTH CENTRAL</b>	820	484	33	59
Worcester, Mass.	63	51	1	4	Birmingham, Ala.	131	88	3	7
<b>MIDDLE ATLANTIC</b>	3,648	2,280	133	224	Chattanooga, Tenn.	72	39	6	8
Albany, N. Y.	59	42	1	4	Knoxville, Tenn.	50	38	—	1
Allentown, Pa.	31	27	1	5	Louisville, Ky.	117	65	9	10
Buffalo, N. Y.	166	116	4	6	Memphis, Tenn.	190	109	4	7
Camden, N. J.	42	21	3	3	Mobile, Ala.	83	45	6	5
Elizabeth, N. J.	39	31	—	7	Montgomery, Ala.	57	34	1	7
Erie, Pa.	65	45	2	9	Nashville, Tenn.	120	66	4	14
Jersey City, N. J.	79	47	6	11	<b>WEST SOUTH CENTRAL</b>	1,687	939	58	110
Newark, N. J.	89	34	27	6	Austin, Tex.	50	32	2	8
New York City, N. Y. †	1,606	1,007	43	90	Baton Rouge, La.	55	32	2	2
Paterson, N. J.	44	28	1	5	Corpus Christi, Tex.	32	18	1	4
Philadelphia, Pa.	701	408	22	22	Dallas, Tex.	250	129	10	15
Pittsburgh, Pa.	264	154	12	16	El Paso, Tex.	77	49	5	16
Reading, Pa.	44	30	—	8	Fort Worth, Tex.	121	75	2	8
Rochester, N. Y.	131	93	6	16	Houston, Tex.	329	155	3	11
Schenectady, N. Y.	30	20	—	—	Little Rock, Ark.	59	30	6	3
Scranton, Pa.	40	25	1	3	New Orleans, La.	199	98	8	12
Syracuse, N. Y.	89	63	2	5	Oklahoma City, Okla. *	118	70	4	5
Trenton, N. J.	59	40	2	3	San Antonio, Tex.	203	132	5	13
Utica, N. Y.	32	22	—	3	Shreveport, La.	77	48	2	5
Yonkers, N. Y.	38	27	—	2	Tulsa, Okla.	117	71	8	8
<b>ST NORTH CENTRAL</b>	2,985	1,778	106	142	<b>MOUNTAIN</b>	649	375	24	65
Akron, Ohio	81	45	4	—	Albuquerque, N. Mex.	75	37	7	24
Canton, Ohio	40	22	1	3	Colorado Springs, Colo.	37	19	2	6
Chicago, Ill.	776	452	22	24	Denver, Colo.	180	95	5	9
Cincinnati, Ohio	189	130	5	14	Las Vegas, Nev.	22	12	1	4
Cleveland, Ohio	236	133	10	5	Ogden, Utah	24	16	1	5
Columbus, Ohio	185	108	9	8	Phoenix, Ariz.	155	87	3	7
Dayton, Ohio	116	62	3	5	Pueblo, Colo.	24	22	—	3
Detroit, Mich.	409	253	14	21	Salt Lake City, Utah	60	35	3	5
Evansville, Ind.	43	33	1	2	Tucson, Ariz.	72	52	2	2
Fort Wayne, Ind.	76	46	6	—	<b>PACIFIC</b>	2,351	1,531	67	215
Gary, Ind.	54	23	4	9	Berkeley, Calif.	33	22	—	4
Grand Rapids, Mich.	50	35	1	2	Fresno, Calif.	82	51	2	16
Indianapolis, Ind.	175	97	7	8	Glendale, Calif.	49	37	1	3
Madison, Wis.	49	26	1	6	Honolulu, Hawaii *	75	44	5	6
Milwaukee, Wis.	155	96	3	8	Long Beach, Calif.	139	86	2	11
Peoria, Ill.	44	29	1	—	Los Angeles, Calif.	848	571	20	76
Rockford, Ill.	63	41	4	11	Oakland, Calif.	103	62	3	6
South Bend, Ind.	45	31	1	5	Pasadena, Calif.	52	40	—	4
Toledo, Ohio	129	78	5	9	Portland, Oreg.	161	112	5	12
Youngstown, Ohio	70	38	4	2	Sacramento, Calif.	56	33	2	2
<b>ST NORTH CENTRAL</b>	954	633	30	60	San Diego, Calif.	166	110	5	11
Des Moines, Iowa	70	47	2	4	San Francisco, Calif.	231	133	13	16
Duluth, Minn.	31	25	—	1	San Jose, Calif.	57	44	—	2
Kansas City, Kans.	45	27	2	2	Seattle, Wash.	191	114	5	29
Kansas City, Mo.	151	102	4	6	Spokane, Wash.	64	47	2	11
Lincoln, Nebr.	22	16	—	3	Tacoma, Wash.	44	25	2	6
Minneapolis, Minn.	129	85	5	6	<b>Total</b>	15,232	9,284	511	1,033
Omaha, Nebr.	84	56	4	4	<b>Expected Number</b>	13,648	8,034	555	593
St. Louis, Mo.	250	156	4	19	<b>Cumulative Total (includes reported corrections for previous weeks)</b>	74,543	45,224	2,544	4,303
St. Paul, Minn.	94	69	6	2					
Wichita, Kans.	78	50	3	13					

† Delayed report for week ending Jan. 27, 1973

\* Estimate based on average percent of divisional total

**SALMONELLOSIS — Continued**

pork products were collected from several of the retailers and were positive for *S. agona* and *S. anatum*.

An investigation of the meat products plant was subsequently conducted. Hog stomachs used as casing for the head cheese were tested and were positive for *S. agona* and *S. anatum*. The hog stomachs and other ingredients used in the head cheese had been provided by a Virginia slaughter house, which received pigs from a large number of suppliers. Thus, it was not possible to trace the origin of the hog stomachs used by the New Jersey firm. Examination of factory workers at the plant disclosed 1 worker with a positive stool culture for *S. agona* and *S. anatum*.

Investigation of the manufacturing process for the head cheese revealed that hog snout and tongue were cooked at 210°F. for 1½ hours, diced, and stuffed into hog stomachs. The head cheeses were subsequently cooked in water at 210°F. for ½ hour. This procedure was intended to insure an internal temperature in the head cheese of 152°F., but there was little actual monitoring of the adequacy of the cooking process.

Control measures included embargo of the meat products that were positive by culture. The infected factory worker was not allowed to work until his stool culture became negative for salmonella. The plant resumed full operation after it had undergone complete cleaning and had instituted revised production controls for the head cheese. It was

also recommended that the plant substitute artificial casings for hog stomachs in the manufacture of this product.

(Reported by teams from the New Jersey State Department of Health; the New Jersey State Department of Agriculture; the Lawrence Township Health Department; the Linden Health Department; and an EIS Officer.)

**Editorial Note**

Head cheese has previously been associated with outbreaks of salmonellosis. In 1969, 3 cases of *S. anatum* enteritis associated with this food item were reported from Washington State, and this serotype has frequently been isolated from swine and pork products. The means by which *S. agona*, which has been isolated most commonly from fish meal and poultry, contaminated the hog stomachs remains unknown.

The duration and temperature at which a food product must be cooked to eliminate salmonella varies with the nature of the food and the strain of the contaminating organism. In general, heating the food to 140°F. for a few minutes will greatly reduce the number of viable organisms. Methods of heat treatment must insure that the internal temperature of the product reaches the desired level and that portions of each batch are not inadequately cooked because of uneven heat distribution. After heat treatment, however, the titer in the food may again reach an infectious level if viable organisms survive the heating or are later reintroduced.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

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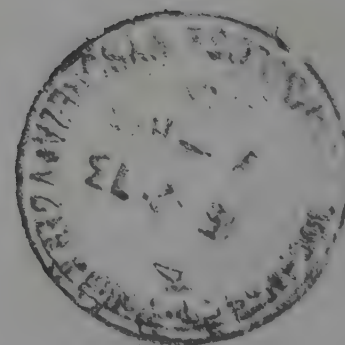
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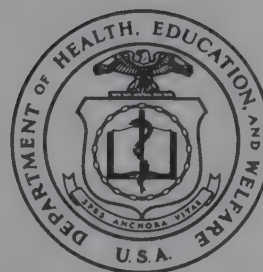


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# Morbidity and Mortality



U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

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## EPIDEMIOLOGIC NOTES AND REPORTS HUMAN LEPTOSPIROSIS — California

On approximately Oct. 6, 1972, a 36-year-old neurosurgeon from Palo Alto, California, became ill with malaise, myalgia, and headache. His symptoms were relatively mild until October 25, when he had acute onset of extreme lethargy, chills, and fever. Over the next 5 days, he experienced anorexia, intense headache, arthralgia in the knees and ankles, and low back pain. His temperature ranged from 101° to 102.6°F., and subsequent physical examination revealed a palpable spleen tip. He had no meningeal signs, hepatomegaly, conjunctivitis, lymphadenopathy, or rash. The urine contained 10 to 15 red blood cells, 4 to 6 white blood cells, and a trace of protein. Liver function tests were normal.

Intravenous ampicillin was begun on the 5th day of illness, but within 1 hour after the 1st 2-gram dose, the patient experienced prolonged rigor. His temperature which had been

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Summary of Reported Cases of Infectious Syphilis	56

temporarily lowered to 99°F. with acetaminophen rose to 103°F., and his pulse to 120 per minute. Following this episode, the patient remained afebrile. Ampicillin was continued for 6 days, and recovery was uneventful. The California Department of Public Health Laboratory reported that the leptospiral microscopic agglutination titer to Tarassovi rose from less than 1:50 to 1:6,400.

Past history revealed that the patient had vacationed at a resort at Yelapa, Jalisco State, on the Pacific coast of

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	6th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 6 WEEKS		
	February 10, 1973	February 12, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	23	42	35	231	218	183
Brucellosis	2	1	—	10	13	7
Chickenpox	5,230	3,500	—	26,843	19,042	—
Diphtheria	2	1	5	12	7	17
Encephalitis, primary:						
Arthropod-borne and unspecified	15	18	16	82	90	120
Encephalitis, post-infectious	4	5	8	17	26	42
Hepatitis, serum (Hepatitis B)	83	148	128	752	1,050	736
Hepatitis, infectious (Hepatitis A)	861	1,080	1,067	5,541	6,407	6,407
Malaria	5	14	39	16	220	278
Measles (rubeola)	676	474	645	3,441	3,663	3,663
Meningococcal infections, total	25	49	84	161	215	394
Civilian	25	49	82	153	208	377
Military	—	—	2	8	7	17
Mumps	1,869	2,027	2,514	10,059	12,425	14,613
Rubella (German measles)	385	565	889	2,215	2,839	3,580
Tetanus	2	4	2	7	6	8
Tuberculosis, new active	467	478	—	3,006	3,016	—
Tularemia	2	3	3	10	12	12
Typhoid fever	3	5	4	20	26	26
Typhus, tick-borne (Rky. Mt. spotted fever)	1	—	—	3	9	3
Venereal Diseases:						
Gonorrhea	11,683	13,467	—	83,260	76,964	—
Syphilis, primary and secondary	496	414	—	3,087	2,505	—
Rabies in animals	64	67	67	316	382	382

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	—	Poliomyelitis, total:	—
Botulism:	—	Paralytic:	—
Congenital rubella syndrome:	2	Psittacosis: Mass. — 1	2
Leprosy: *	3	Rabies in man:	—
Leptospirosis:	5	Trichinosis: Ohio — 1	6
Plague:	—	Typhus, murine:	—

\*Delayed reports: Leprosy: (1972) Del. delete 1

**LEPTOSPIROSIS – Continued**

Mexico from Sept. 30 through Oct. 6, 1972. His activities included swimming in the ocean and in a remote jungle stream. He reported no contact with livestock other than saddle horses. Tests on serum specimens obtained from the patient's wife, who accompanied him to Mexico but remained well, are in progress.

(Reported by Arthur W. Traum, M.D., private physician, and O. W. Henney, R.N., Permanente Medical Group, Redwood City, California; Linda Bradford, Serology Section, and Ronald M. Wood, Ph.D., Chief, Microbial Diseases Laboratory, and James Chin, M.D., State Epidemiologist, California State Department of Public Health.)

**Editorial Note**

Human Tarassovi serogroup infections are rare in the

United States; only 1 other case has been reported to CDC previously. Human Tarassovi infections occur in Australasia, South America, and Europe where exposure to infected cattle and swine is the usual source. Although Tarassovi infections appear to be common in wildlife in the southeastern United States, they appear infrequently in domestic animals.

A possible Jarisch-Herxheimer reaction was believed to have occurred in this patient following ampicillin therapy. This has been reported previously in patients receiving a large initial dose of penicillin early in the course of the disease (1,2).

**References**

1. Turner LH: Leptospirosis. *Brit Med J* 1:231-233, 1969
2. Gsell O: The therapy of leptospirosis. In Symposium on the Leptospire, Walter Reed Army Medical Center (Medical Science Publication No. 1), Washington, GPO, 1953, pp 210-220

**MEASLES – Tennessee**

Between Dec. 10, 1972, and Feb. 13, 1973, 57 cases of measles were reported in Madison County, Tennessee (Figure 1); 56 of the 57 cases occurred in the City of Jackson. Forty-four (77%) of the cases were in children 5- to 15-years-old.

Investigation revealed that 30 cases occurred in students attending the W.J. Elementary School, 14 were in children at other elementary schools, and 13 were in preschool children. In addition, 7 of the earliest cases were in children who attended the same Sunday school, and 2 of these 7 also attended the W.J. Elementary School.

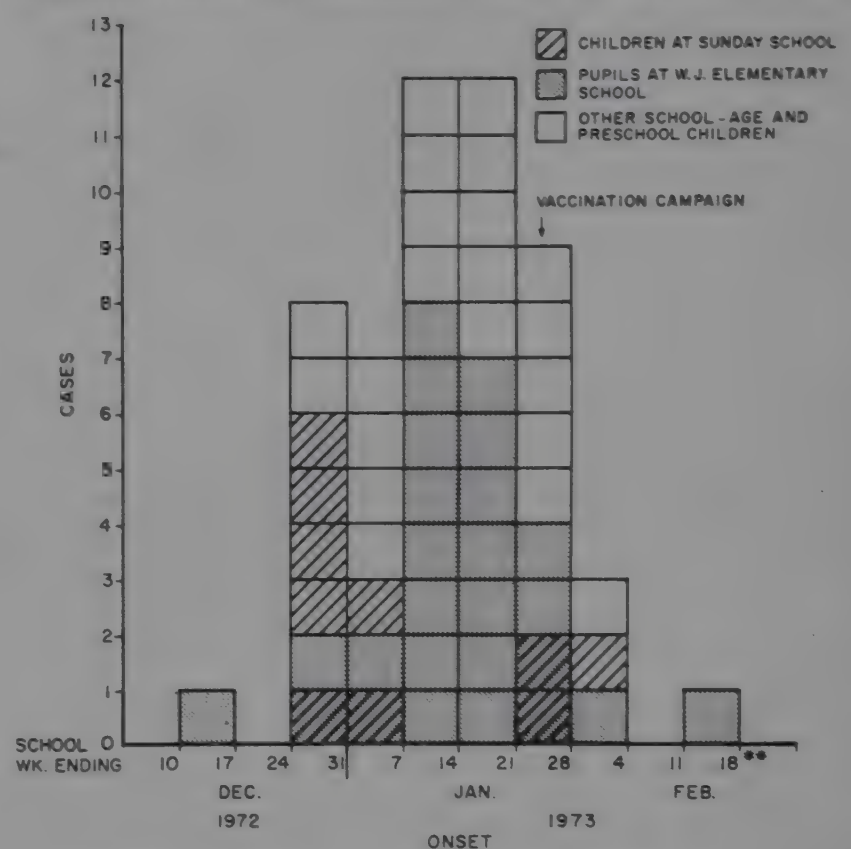
The overall attack rate for this elementary school was 8.2%, and for children without a previous history of measles immunization or natural disease, it was 25.7%; the attack rate for immunized children was 1.4%. Vaccine efficacy calculated from a survey of 315 (85%) of the children at the school was 94.6%; the immunity level was 67.3%.

On January 23 and 24, vaccination campaigns were held in the city and county schools, and special night clinics were set up for preschoolers. Procedures for ongoing surveillance of measles by the city schools, local physicians, the Madison County Health Department, and surrounding rural counties were established.

In October 1972, an immunization status survey of 142 randomly selected 2-year-old children had been conducted in Madison County, and the overall immunization level was found to be 69.0%. Of the 44 unimmunized 2-year-olds identified in the survey, the largest concentration (13) was in the Jackson area where the earliest known cases of measles in this outbreak were reported.

(Reported by W. R. Bronson, Principal, and Shirley Reams, Secretary, W.J. Elementary School, Jackson; A. J. Mueller, M.D., Health Officer, Madison County Health Department; Stephen J. Barid and Robert Flye, Public Health Advisors, and Robert H. Hutcheson, Jr., M.D., State Epidemiologist,

Figure 1  
MEASLES CASES, BY DATE OF ONSET  
MADISON COUNTY, TENNESSEE\* – DEC. 10, 1972-FEB. 13, 1973



\* DATE OF ONSET FOR 4 CASES AT W. J. ELEMENTARY SCHOOL UNKNOWN

\*\* PRELIMINARY DATA

Tennessee Department of Public Health; and an EIS Officer.)  
**Editorial Note**

As the peak measles period approaches, it becomes increasingly important to identify cases early and immunize susceptible populations. The 57 cases that have been identified in this outbreak stemmed from an initial report to the health department of only 4 cases.

**CURRENT TRENDS**

**INFLUENZA – California, Connecticut, Hawaii, North Dakota, Oklahoma, Oregon, South Dakota**

**California**

Influenza B virus has been isolated from a San Mateo County child who became ill in mid-January with severe myalgia. He had no history of travel to Hawaii, the only area where significant outbreaks of influenza B have been reported. No other cases of influenza B have been identified in the

state.

(Reported by James Chin, M.D., State Epidemiologist, California State Department of Public Health.)

**Connecticut**

In the 1st 5 weeks of 1973, 44 of 169 Connecticut towns reported influenza; 24 towns reported laboratory-

confirmed illness due to A/England/42/72 virus. There have been 14 isolates of A/England/42/72 and 29 positive serologies. School absenteeism appeared to peak in the week ending January 27.

(Reported by Martin Ross, Ph.D., Chief, Virology Section, Laboratory Division, and James C. Hart, M.D., Director, Preventable Diseases Division, Connecticut State Department of Health.)

#### Hawaii

Most reports of isolates of influenza B in the United States have come from Hawaii, and although cases are still being reported, influenza B activity appeared to peak in December. The clinical illness in children was characterized by gastroenteritis as well as by upper respiratory symptoms. Over the past 6 weeks, there have been sporadic outbreaks of influenza A, which have been associated with increases in emergency room visits and school and industrial absenteeism. (Reported by Ned H. Weibenga, M.D., State Epidemiologist, Hawaii Department of Health.)

#### North Dakota

Physicians began reporting increased influenza and influenza-like disease in early January; A/England/42/72 virus has been documented in 6 patients. Respiratory illness has been widespread in Fargo, where school absenteeism has risen since mid-January. An outbreak at the University of North Dakota in Grand Forks involved an estimated 4,000 of 8,600 students, and 30 required hospitalization. The university outbreak subsided in the last week of January, and in the 1st 2 weeks of February, increased case reporting was noted in the Grand Forks area and on the Grand Forks Air Force Base. (Reported by John Swenson, M.D., Director, Student Health Service, University of North Dakota, Grand Forks; Arthur Gustafson, Director, Grand Forks Public Health Laboratory; James R. Amos, M.D., State Health Officer, and Kenneth Mosser, State Epidemiologist, North Dakota State Department of Health.)

#### Oklahoma

Since mid-January, case reports of influenza-like disease have increased in Oklahoma. Four seroconversions to influenza A and 5 viral isolates have been documented. In addition, there has been an increase in school absenteeism in 1 sentinel school district in the past 2 weeks.

(Reported by Stanley W. Ferguson, Ph.D., State Epidemiologist, and Mark A. Roberts, Staff Epidemiologist, Oklahoma State Department of Health.)

#### Oregon

Oregon physicians began reporting increased influenza-

like illness in the western counties in mid-January. The disease progressed across the state from west to east, has involved most counties, and now appears to have peaked. One isolate of influenza B was obtained from a patient who had recently returned from Hawaii. Other isolates from Oregon have been influenza A/England/42/72.

(Reported by John A. Googins, M.D., State Epidemiologist, Oregon State Board of Health.)

#### South Dakota

Influenza outbreaks have been reported by private physicians across the state, by the Student Health Service of the University of South Dakota, by the Indian Health Service, and by Ellsworth Air Force Base medical authorities. Elementary school absenteeism in Pierre and absenteeism among the state highway employees have been elevated for the past 3 weeks.

(Reported by Robert S. Westaby, M.D., State Epidemiologist, South Dakota State Department of Health.)

#### Editorial Note

Influenza case reporting has decreased in many areas of the United States, and national pneumonia-influenza mortality from 122 cities declined this week for the 1st time since its rise above the epidemic threshold level in the week ending Dec. 30, 1972. The WHO Influenza Center for the Americas reports 8 influenza B isolates from Hawaii and 1 seroconversion to influenza B from Colorado in the week ending January 27, 2 influenza B isolates from Hawaii in the week ending February 3, and 1 isolate from California in the week ending February 10 (Table 1). The remainder of isolates submitted have been antigenically similar to the A/England/42/72 variant.

Table 1  
Influenza Laboratory Surveillance — United States

Week Ending	Number of Laboratories Participating	Viral Isolation		Paired Sera	
		Number Tested	Number Isolates	Number Tested	Number Positive
1/27/73	46	891	209*	361	102****
2/3/73	37	537	149**	535	147
2/10/73	30	516	126***	623	200

\*8 were influenza B from Hawaii

\*\*2 were influenza B from Hawaii

\*\*\*1 was influenza B from California

\*\*\*\*1 was influenza B from Colorado

#### INTERNATIONAL NOTES QUARANTINE MEASURES

The following changes should be made in the "Supplement — United States Designated Yellow Fever Vaccination Centers," MMWR, Vol. 21, No. 20:

#### CALIFORNIA

**Loma Linda** Loma Linda University 92354  
(Change telephone to 796-7311,  
ext. 3754)

**Sacramento** County Health Department 95817  
(Change clinic hours to:  
Wed., 1-4 p.m.)

#### GEORGIA

**Rome** Floyd County Health Department 30161  
(CENTER CLOSED)

#### WEST VIRGINIA

**Charleston** Kanawha-Charleston Health Dept. 25323  
(Change telephone to 348-8160)

#### Erratum, Vol. 22, No. 5, p. 42

In Figure 3, "Percent Change\* in Reported Measles Cases, United States — 1st 4 Weeks, 1972," correct the symbol in the legend to read  $\geq 200\%$  increase.

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING FEBRUARY 10, 1973 AND FEBRUARY 12, 1972 (6th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
				1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES	23	2	5,230	2	12	15	18	4	83	861	1,080
NEW ENGLAND	1	—	503	—	2	2	—	—	5	67	93
Maine *	—	—	60	—	—	—	—	—	—	2	10
New Hampshire	—	—	47	—	—	—	—	—	1	5	2
Vermont	—	—	20	—	—	—	—	—	—	2	5
Massachusetts	1	—	236	—	—	1	—	—	1	34	42
Rhode Island	—	—	71	—	2	1	—	—	1	2	20
Connecticut	—	—	69	—	—	—	—	—	2	22	14
MIDDLE ATLANTIC	8	1	247	—	—	2	2	1	31	166	179
Upstate New York	1	—	2	—	—	1	2	1	6	45	42
New York City	5	—	84	—	—	—	—	—	9	45	71
New Jersey	1	1	NN	—	—	1	—	—	8	34	39
Pennsylvania	1	—	161	—	—	—	—	—	8	42	27
EAST NORTH CENTRAL	1	—	2,007	—	1	7	4	—	23	188	184
Ohio	—	—	474	—	1	3	—	—	3	33	30
Indiana	—	—	248	—	—	—	—	—	1	16	10
Illinois	—	—	—	—	—	1	2	—	4	57	54
Michigan	1	—	615	—	—	3	2	—	13	77	79
Wisconsin	—	—	670	—	—	—	—	—	2	5	11
WEST NORTH CENTRAL	1	—	843	1	3	3	1	—	8	47	38
Minnesota *	—	—	40	—	—	—	—	—	—	2	2
Iowa	—	—	645	—	—	—	1	—	5	5	6
Missouri	1	—	66	—	—	3	—	—	—	23	7
North Dakota	—	—	16	—	—	—	—	—	—	—	—
South Dakota	—	—	2	1	3	—	—	—	—	7	9
Nebraska	—	—	39	—	—	—	—	—	—	2	2
Kansas	—	—	35	—	—	—	—	—	3	8	12
SOUTH ATLANTIC	7	—	497	—	—	1	3	1	13	151	214
Delaware	—	—	3	—	—	—	—	—	—	1	1
Maryland	—	—	35	—	—	—	1	1	5	34	28
District of Columbia	—	—	7	—	—	—	—	—	—	3	3
Virginia *	—	—	60	—	—	—	—	—	3	14	34
West Virginia	—	—	338	—	—	—	1	—	3	14	8
North Carolina	2	—	NN	—	—	—	1	—	—	18	26
South Carolina	1	—	47	—	—	1	—	—	1	9	15
Georgia	—	—	7	—	—	—	1	—	—	30	14
Florida	4	—	—	—	—	—	—	—	1	28	85
EAST SOUTH CENTRAL	3	—	552	—	—	—	1	—	1	54	51
Kentucky	—	—	508	—	—	—	1	—	—	16	25
Tennessee	1	—	NN	—	—	—	—	—	—	32	23
Alabama	2	—	30	—	—	—	—	—	1	3	2
Mississippi	—	—	14	—	—	—	—	—	—	3	1
WEST SOUTH CENTRAL	2	1	406	1	1	—	5	—	—	131	103
Arkansas *	—	—	6	—	—	—	3	—	—	1	3
Louisiana	—	—	NN	—	—	—	—	—	—	—	15
Oklahoma *	1	—	55	—	—	—	1	—	—	31	15
Texas	1	1	345	1	1	—	1	—	—	99	70
MOUNTAIN	—	—	23	—	—	—	—	—	1	17	38
Montana	—	—	5	—	—	—	—	—	—	3	4
Idaho	—	—	—	—	—	—	—	—	1	2	5
Wyoming	—	—	—	—	—	—	—	—	—	—	1
Colorado	—	—	—	—	—	—	—	—	—	—	—
New Mexico	—	—	16	—	—	—	—	—	—	9	7
Arizona	—	—	—	—	—	—	—	—	—	—	20
Utah	—	—	2	—	—	—	—	—	—	3	1
Nevada	—	—	—	—	—	—	—	—	—	—	—
PACIFIC	—	—	152	—	5	—	2	2	1	40	180
Washington	—	—	103	—	4	—	1	—	—	4	18
Oregon	—	—	—	—	—	—	—	2	1	34	36
California	—	—	—	—	—	—	—	—	—	—	114
Alaska *	—	—	—	—	—	—	—	—	—	—	5
Hawaii	—	—	49	—	—	—	—	—	—	2	7
Guam *	—	—	7	—	—	—	—	—	1	2	5
Puerto Rico	—	—	8	—	—	—	—	—	—	4	22
Virgin Islands	—	—	—	—	—	—	—	—	—	—	—

\*Delayed reports: Aseptic meningitis: (1972) Minn. 1, (1973) Guam 1

Brucellosis: (1973) Va. delete 1

Chickenpox: (1973) Me. 45, Guam 8

Encephalitis, primary: (1972) Minn. 1

Hepatitis B: (1972) Minn. 1, Okla. 1, Alaska 3, (1973) Ark. 1

Hepatitis A: (1972) Ark. 2, (1973) Me. 6, Ark. 3, Guam 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING FEBRUARY 10, 1973 AND FEBRUARY 12, 1972 (6th WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES . . . . .	5	16	676	3,441	3,663	25	161	215	1,869	10,059	385	2,215
NEW ENGLAND . . . . .	1	1	303	1,416	182	2	11	6	72	407	41	227
Maine . . . . .	—	—	4	6	27	—	—	1	1	13	—	8
New Hampshire . . . . .	—	—	58	257	8	—	1	—	1	21	1	4
Vermont . . . . .	—	—	12	26	38	—	—	—	22	77	—	5
Massachusetts . . . . .	—	—	140	704	15	1	5	2	25	167	27	112
Rhode Island . . . . .	—	—	58	118	33	—	—	3	5	30	2	6
Connecticut . . . . .	1	1	31	305	61	1	5	—	18	99	11	92
MIDDLE ATLANTIC . . . . .	1	3	57	261	311	1	23	17	212	931	104	298
Upstate New York . . . . .	1	2	9	31	16	—	7	5	NN	NN	7	34
New York City . . . . .	—	—	38	163	41	—	6	4	129	562	5	24
New Jersey . . . . .	—	—	2	46	241	1	5	4	55	209	90	224
Pennsylvania * . . . . .	—	1	8	21	13	—	5	4	28	160	2	16
EAST NORTH CENTRAL . . . . .	—	1	227	977	1,587	1	13	25	597	3,100	128	561
Ohio . . . . .	—	—	11	49	42	—	10	11	97	381	11	69
Indiana . . . . .	—	—	26	92	436	1	1	4	70	280	31	133
Illinois . . . . .	—	—	72	345	435	—	1	3	132	573	19	75
Michigan . . . . .	—	1	73	303	243	—	1	6	120	890	21	112
Wisconsin . . . . .	—	—	45	188	431	—	—	1	178	976	46	172
WEST NORTH CENTRAL . . . . .	—	—	11	99	128	5	16	16	300	927	16	235
Minnesota . . . . .	—	—	3	7	4	—	—	1	9	26	3	13
Iowa . . . . .	—	—	5	75	94	—	3	—	240	674	11	54
Missouri . . . . .	—	—	—	3	17	3	8	2	46	109	—	108
North Dakota . . . . .	—	—	3	6	9	—	—	—	1	18	—	18
South Dakota . . . . .	—	—	—	—	2	2	2	1	1	3	1	1
Nebraska . . . . .	—	—	—	1	2	—	—	3	3	27	1	24
Kansas . . . . .	—	—	—	7	—	—	3	9	—	70	—	17
SOUTH ATLANTIC . . . . .	—	4	20	106	384	6	26	49	266	1,123	13	191
Delaware . . . . .	—	—	—	1	1	—	—	1	8	70	1	1
Maryland . . . . .	—	—	—	—	3	2	9	4	40	170	—	2
District of Columbia . . . . .	—	—	—	1	—	—	1	2	—	4	—	1
Virginia . . . . .	—	3	2	9	—	—	3	12	58	118	3	6
West Virginia . . . . .	—	—	3	25	18	—	—	5	84	406	3	29
North Carolina . . . . .	—	1	—	3	15	1	7	7	NN	NN	—	4
South Carolina . . . . .	—	—	4	11	52	—	2	7	21	50	3	6
Georgia . . . . .	—	—	6	7	20	3	3	—	3	7	—	3
Florida . . . . .	—	—	5	49	275	—	1	11	52	298	3	139
EAST SOUTH CENTRAL . . . . .	—	1	10	94	202	—	12	18	198	619	19	101
Kentucky . . . . .	—	—	5	20	100	—	4	5	56	159	3	28
Tennessee . . . . .	—	—	4	55	23	—	5	7	39	261	15	60
Alabama . . . . .	—	1	—	—	48	—	2	5	26	111	—	7
Mississippi . . . . .	—	—	1	19	31	—	1	1	77	88	1	6
WEST SOUTH CENTRAL . . . . .	2	3	29	149	188	9	22	30	82	706	44	173
Arkansas * . . . . .	—	—	2	6	4	—	1	6	6	22	—	8
Louisiana . . . . .	—	—	6	13	6	1	2	11	—	2	—	—
Oklahoma . . . . .	—	—	—	4	2	—	2	—	20	37	7	13
Texas . . . . .	2	3	21	126	176	8	17	13	56	645	37	152
W MOUNTAIN . . . . .	1	1	6	57	258	1	8	4	60	576	3	114
Montana . . . . .	—	—	—	1	4	1	1	—	4	42	—	8
Idaho . . . . .	—	—	4	9	3	—	—	2	2	25	—	4
Wyoming . . . . .	—	—	1	1	—	—	—	1	—	141	—	—
Colorado * . . . . .	---	---	---	10	132	---	2	—	---	33	---	41
New Mexico . . . . .	1	1	1	30	17	—	1	1	47	212	3	15
Arizona . . . . .	---	---	---	6	59	---	1	—	---	98	---	7
Utah . . . . .	—	—	—	—	43	—	1	—	7	23	—	38
Nevada . . . . .	—	—	—	—	—	—	2	—	—	2	—	1
PACIFIC . . . . .	—	2	13	282	423	—	30	50	82	1,670	17	315
Washington . . . . .	—	—	1	157	121	—	3	5	18	184	6	61
Oregon . . . . .	—	—	11	63	7	—	2	3	55	411	10	77
California . . . . .	---	2	---	59	281	---	25	42	---	956	---	174
Alaska . . . . .	---	---	---	—	3	---	—	—	---	90	---	—
Hawaii . . . . .	—	—	1	3	11	—	—	—	9	29	1	3
Guam * . . . . .	—	—	—	2	—	—	—	1	1	1	—	1
Puerto Rico . . . . .	—	—	31	188	44	—	—	—	12	80	2	6
Virgin Islands . . . . .	—	—	—	—	—	—	—	2	1	2	—	—

\*Delayed reports: Malaria: (1972) Pa. 1  
Measles: (1973) Colo. delete 8, Guam 2

Mumps: (1973) Ark. 1  
Rubella: (1973) Ark. 1, Guam 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING FEBRUARY 10, 1973 AND FEBRUARY 12, 1972 (6th WEEK) – Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES .....	7	467	3,006	10	3	20	1	3	11,683	496	64	316
NEW ENGLAND .....	—	27	105	—	1	1	—	—	391	21	4	17
Maine *	—	5	7	—	—	—	—	—	16	—	4	17
New Hampshire .....	—	—	1	—	—	—	—	—	12	—	—	—
Vermont *	—	—	2	—	—	—	—	—	6	1	—	—
Massachusetts .....	—	20	62	—	1	1	—	—	208	9	—	—
Rhode Island .....	—	2	6	—	—	—	—	—	60	2	—	—
Connecticut .....	—	—	27	—	—	—	—	—	89	9	—	—
MIDDLE ATLANTIC .....	2	108	598	—	—	4	—	1	1,600	95	—	4
Upstate New York *	—	13	144	—	—	—	—	—	376	2	—	1
New York City .....	1	32	199	—	—	4	—	—	348	65	—	—
New Jersey .....	1	31	121	—	—	—	—	—	286	20	—	—
Pennsylvania .....	—	32	134	—	—	—	—	1	590	8	—	3
EAST NORTH CENTRAL .....	1	94	472	—	1	2	—	—	1,626	26	13	29
Ohio *	—	31	204	—	1	1	—	—	292	8	9	9
Indiana .....	—	14	52	—	—	—	—	—	183	8	—	2
Illinois .....	—	25	118	—	—	—	—	—	404	5	4	8
Michigan .....	—	12	76	—	—	1	—	—	575	5	—	—
Wisconsin *	1	12	22	—	—	—	—	—	172	—	—	10
WEST NORTH CENTRAL .....	2	27	106	1	—	—	1	1	1,059	6	15	97
Minnesota .....	—	3	5	—	—	—	—	—	210	3	13	37
Iowa .....	—	3	15	—	—	—	—	—	200	—	—	31
Missouri .....	2	11	51	1	—	—	1	1	374	1	1	9
North Dakota .....	—	—	4	—	—	—	—	—	12	—	1	17
South Dakota .....	—	1	10	—	—	—	—	—	58	—	—	3
Nebraska .....	—	5	9	—	—	—	—	—	57	—	—	—
Kansas .....	—	4	12	—	—	—	—	—	148	2	—	—
SOUTH ATLANTIC .....	1	105	652	1	—	4	—	—	3,511	188	8	32
Delaware .....	—	—	9	—	—	—	—	—	44	1	—	—
Maryland .....	—	15	68	—	—	—	—	—	237	2	1	1
District of Columbia .....	—	4	35	—	—	—	—	—	329	20	—	—
Virginia .....	—	15	92	1	—	—	—	—	486	53	2	13
West Virginia .....	—	4	26	—	—	—	—	—	43	—	1	5
North Carolina *	—	16	103	—	—	1	—	—	546	12	—	—
South Carolina .....	—	—	80	—	—	1	—	—	360	25	—	—
Georgia .....	—	17	102	—	—	1	—	—	578	44	3	7
Florida .....	1	34	137	—	—	1	—	—	888	31	1	6
EAST SOUTH CENTRAL .....	1	53	249	4	—	1	—	1	1,227	66	15	74
Kentucky .....	—	17	64	1	—	—	—	—	82	40	11	27
Tennessee .....	—	18	66	3	—	—	—	—	485	10	4	31
Alabama .....	1	9	78	—	—	1	—	1	348	1	—	16
Mississippi .....	—	9	41	—	—	—	—	—	312	15	—	—
WEST SOUTH CENTRAL .....	—	36	285	4	—	1	—	—	1,625	80	9	36
Arkansas .....	—	8	39	1	—	—	—	—	138	4	1	8
Louisiana *	—	10	77	—	—	—	—	—	332	32	1	3
Oklahoma .....	—	5	23	2	—	1	—	—	168	12	—	8
Texas .....	—	13	146	1	—	—	—	—	987	32	7	17
MOUNTAIN .....	—	3	97	—	1	1	—	—	211	—	—	4
Montana .....	—	—	2	—	—	—	—	—	37	—	—	—
Idaho .....	—	—	4	—	—	—	—	—	40	—	—	—
Wyoming .....	—	—	3	—	—	—	—	—	—	—	—	—
Colorado .....	—	—	9	—	—	—	—	—	—	—	—	—
New Mexico .....	—	2	21	—	1	1	—	—	109	—	—	—
Arizona .....	—	—	54	—	—	—	—	—	—	—	—	—
Utah .....	—	1	1	—	—	—	—	—	25	—	—	4
Nevada .....	—	—	3	—	—	—	—	—	—	—	—	—
PACIFIC .....	—	14	442	—	—	6	—	—	433	14	—	23
Washington .....	—	3	45	—	—	—	—	—	194	7	—	—
Oregon .....	—	5	21	—	—	—	—	—	175	5	—	—
California .....	—	—	338	—	—	6	—	—	—	—	—	—
Alaska *	—	—	8	—	—	—	—	—	—	—	—	21
Hawaii .....	—	6	30	—	—	—	—	—	64	2	—	2
Guam *	—	—	3	—	—	—	—	—	5	—	—	—
Puerto Rico .....	—	8	57	—	—	—	—	—	69	9	—	4
Virgin Islands .....	—	—	—	—	—	—	—	—	2	2	—	—

\*Delayed reports: TB: (1972) N.C. delete 1, (1973) Ohio delete 1, Wisc. delete 41, Alaska 8, Guam 1

Gonorrhea: (1973) La. delete 3, Guam 12

Rabies: (1972) Vt. 1, N.Y. Ups. 1, (1973) Me. 1

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING FEBRUARY 10, 1973

Week No.  
6

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
<b>NEW ENGLAND</b>	803	502	21	72	<b>SOUTH ATLANTIC</b>	1,613	880	47	89
Boston, Mass.	252	137	11	24	Atlanta, Ga.	150	77	8	10
Bridgeport, Conn.	58	36	2	10	Baltimore, Md.	224	117	5	8
Cambridge, Mass.	21	17	—	2	Charlotte, N. C.	65	30	4	3
Fall River, Mass.	26	17	—	2	Jacksonville, Fla.	120	63	7	4
Hartford, Conn.	54	31	1	4	Miami, Fla.	155	84	5	9
Lowell, Mass.	34	23	—	3	Norfolk, Va.	68	37	3	7
Lynn, Mass.	25	18	—	1	Richmond, Va.	74	42	1	10
New Bedford, Mass.	30	20	1	4	Savannah, Ga.	47	24	—	3
New Haven, Conn.	49	27	—	2	St. Petersburg, Fla.	124	110	—	7
Providence, R. I.	61	40	2	6	Tampa, Fla.	96	63	1	8
Somerville, Mass.	12	11	—	1	Washington, D. C.	409	185	11	18
Springfield, Mass.	75	42	3	7	Wilmington, Del.	81	48	2	2
Waterbury, Conn.	38	29	—	1					
Worcester, Mass.	68	54	1	5	<b>EAST SOUTH CENTRAL</b>	773	421	28	45
<b>MIDDLE ATLANTIC</b>	3,396	2,138	80	195	Birmingham, Ala.	112	62	8	4
Albany, N. Y.	63	37	2	2	Chattanooga, Tenn.	76	45	4	8
Allentown, Pa.	37	25	—	7	Knoxville, Tenn.	47	29	3	1
Buffalo, N. Y.	165	100	6	14	Louisville, Ky.	145	77	2	7
Camden, N. J.	38	22	2	2	Memphis, Tenn.	152	73	2	5
Elizabeth, N. J.	31	16	1	1	Mobile, Ala.	64	34	3	3
Erie, Pa.	45	30	1	6	Montgomery, Ala.	60	38	1	6
Jersey City, N. J.	68	30	1	5	Nashville, Tenn.	117	63	5	11
Newark, N. J.	72	33	4	6					
New York City, N. Y. †	1,630	1,033	34	81	<b>WEST SOUTH CENTRAL</b>	1,471	803	76	68
Paterson, N. J.	30	23	1	3	Austin, Tex.	47	30	1	3
Philadelphia, Pa.	595	379	9	11	Baton Rouge, La.	37	22	3	—
Pittsburgh, Pa.	206	123	9	24	Corpus Christi, Tex.	38	15	1	1
Reading, Pa.	37	23	1	2	Dallas, Tex.	202	116	12	12
Rochester, N. Y.	131	91	8	16	El Paso, Tex.	37	23	2	5
Schenectady, N. Y.	18	13	—	1	Fort Worth, Tex.	91	58	3	2
Scranton, Pa.	33	26	—	1	Houston, Tex.	348	165	24	17
Syracuse, N. Y.	88	62	1	6	Little Rock, Ark.	70	40	2	4
Trenton, N. J.	42	26	—	1	New Orleans, La.	174	86	6	4
Utica, N. Y.	30	20	—	4	Oklahoma City, Okla.*	103	60	5	3
Yonkers, N. Y.	37	26	—	2	San Antonio, Tex.	173	107	10	11
					Shreveport, La.	71	41	5	5
					Tulsa, Okla.	80	40	2	1
<b>EAST NORTH CENTRAL</b>	2,811	1,692	118	171	<b>MOUNTAIN</b>	609	368	25	55
Akron, Ohio	63	40	3	—	Albuquerque, N. Mex.	48	30	—	11
Canton, Ohio	38	27	1	5	Colorado Springs, Colo.	42	26	2	10
Chicago, Ill.	723	416	38	21	Denver, Colo.	153	86	5	15
Cincinnati, Ohio	190	126	8	11	Las Vegas, Nev.	20	10	2	1
Cleveland, Ohio	208	120	8	8	Ogden, Utah	17	14	—	4
Columbus, Ohio	137	84	6	10	Phoenix, Ariz.	158	97	6	4
Dayton, Ohio	142	74	7	14	Pueblo, Colo.	31	18	1	3
Detroit, Mich.	395	233	16	24	Salt Lake City, Utah	65	42	4	3
Evansville, Ind.	58	38	1	5	Tucson, Ariz.	75	45	5	4
Fort Wayne, Ind.	58	34	1	6					
Gary, Ind.	45	24	4	7	<b>PACIFIC</b>	2,097	1,337	59	152
Grand Rapids, Mich.	67	49	—	16	Berkeley, Calif.	17	16	—	2
Indianapolis, Ind.	173	94	6	3	Fresno, Calif.	63	37	5	2
Madison, Wis.	45	25	1	6	Glendale, Calif.	50	37	3	1
Milwaukee, Wis.	122	73	2	4	Honolulu, Hawaii	64	34	4	4
Peoria, Ill.	50	31	6	7	Long Beach, Calif.	161	107	2	11
Rockford, Ill.	64	42	4	12	Los Angeles, Calif.	698	439	16	63
South Bend, Ind.	46	30	2	3	Oakland, Calif.	118	58	7	11
Toledo, Ohio	111	80	1	4	Pasadena, Calif.	46	34	—	2
Youngstown, Ohio	76	52	3	5	Portland, Oreg.	179	120	4	2
					Sacramento, Calif.	68	36	3	2
<b>WEST NORTH CENTRAL</b>	912	590	45	33	San Diego, Calif.	110	67	5	3
Des Moines, Iowa	51	37	1	2	San Francisco, Calif.	207	135	2	6
Duluth, Minn.	18	12	—	—	San Jose, Calif.	36	19	1	3
Kansas City, Kans.	42	23	6	—	Seattle, Wash.	153	105	5	16
Kansas City, Mo.	159	104	7	4	Spokane, Wash.	72	51	—	13
Lincoln, Nebr.	40	29	5	2	Tacoma, Wash.	55	42	2	11
Minneapolis, Minn.	131	87	5	1					
Omaha, Nebr.	98	53	4	6	<b>Total</b>	14,485	8,731	499	880
St. Louis, Mo.	236	158	11	8	<b>Expected Number</b>	13,630	8,019	553	595
St. Paul, Minn.	90	58	2	3	<b>Cumulative Total (includes reported corrections for previous weeks)</b>	89,031	53,962	3,036	5,179
Wichita, Kans.	47	29	4	7					

†Delayed report for week ending February 3, 1973

\*Estimate based on average percent of divisional total

## SUMMARY OF REPORTED CASES OF INFECTIOUS SYPHILIS

CASES OF PRIMARY AND SECONDARY SYPHILIS BY Reporting Areas January 1973 and January 1972 Provisional Data

Reporting Area	January		Cumulative January		Reporting Area	January		Cumulative January	
	1973	1972	1973	1972		1973	1972	1973	1972
NEW ENGLAND .....	111	63	111	63	EAST SOUTH CENTRAL .....	114	115	114	115
Maine .....	1	1	1	1	Kentucky .....	41	10	41	10
New Hampshire .....	2	-	2	-	Tennessee .....	31	20	31	20
Vermont .....	3	-	3	-	Alabama .....	11	7	11	7
Massachusetts .....	80	30	80	30	Mississippi .....	31	28	31	28
Rhode Island .....	2	-	2	-	WEST SOUTH CENTRAL .....	204	272	204	272
Connecticut .....	23	32	23	32	Arkansas .....	10	28	10	28
MIDDLE ATLANTIC .....	538	440	538	440	Louisiana .....	59	68	59	68
Upstate New York .....	38	40	38	40	Oklahoma .....	13	7	13	7
New York City .....	354	293	354	293	Texas .....	122	169	122	169
Pa. (Excl. Phila.) .....	23	14	23	14	MOUNTAIN .....	68	34	68	34
Philadelphia .....	38	23	38	23	Montana .....	-	-	-	-
New Jersey .....	85	70	85	70	Idaho .....	2	1	2	1
EAST NORTH CENTRAL .....	173	239	173	239	Wyoming .....	-	2	-	2
Ohio .....	14	17	14	17	Colorado .....	29	2	29	2
Indiana .....	31	11	31	11	New Mexico .....	8	12	8	12
Downstate Illinois .....	17	14	17	14	Arizona .....	23	13	23	13
Chicago .....	50	111	50	111	Utah .....	-	-	-	-
Michigan .....	49	84	49	84	Nevada .....	6	4	6	4
Wisconsin .....	12	2	12	2	PACIFIC .....	415	295	415	295
WEST NORTH CENTRAL .....	29	31	29	31	Washington .....	24	11	24	11
Minnesota .....	10	1	10	1	Oregon .....	5	2	5	2
Iowa .....	2	2	2	2	California .....	378	279	378	279
Missouri .....	14	21	14	21	Alaska .....	1	-	1	-
North Dakota .....	-	-	-	-	Hawaii .....	-	3	-	3
South Dakota .....	1	-	1	-	U.S. TOTAL .....	2,196	1,988	2,196	1,988
Nebraska .....	1	3	1	3	TERRITORIES .....	75	65	75	65
Kansas .....	1	4	1	4	Puerto Rico .....	70	58	70	58
SOUTH ATLANTIC .....	544	499	544	499	Virgin Islands .....	5	7	5	7
Delaware .....	8	3	8	3	Note: Cumulative Totals include revised and delayed reports through previous months.				
Maryland .....	75	79	75	79					
District of Columbia .....	62	63	62	63					
Virginia .....	72	29	72	29					
West Virginia .....	2	1	2	1					
North Carolina .....	65	47	65	47					
South Carolina .....	31	51	31	51					
Georgia .....	107	144	107	144					
Florida .....	122	82	122	82					

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to: Center for Disease Control  
Attn: Editor  
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PUBLIC HEALTH SERVICE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION  
CENTER FOR DISEASE CONTROL  
ATLANTA, GEORGIA 30333

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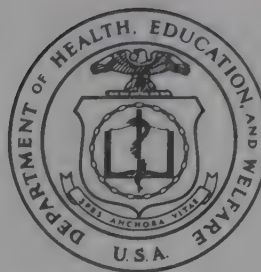
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# Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION  
DATE OF RELEASE: FEBRUARY 23, 1973 - ATLANTA, GEORGIA 30333

## EPIDEMIOLOGIC NOTES AND REPORTS BOTULINAL TOXIN IN A COMMERCIAL FOOD PRODUCT - United States

On February 17, the United Canning Company, East Palestine, Ohio, issued a recall of 11 lots of #10 cans of mushrooms after botulinal toxin type B was detected in cans from 1 lot. By February 19, a total of 20 lots of these canned mushrooms had been recalled; 5 were known to contain botulinal toxin. These cans are distributed under 11 labels to restaurants and wholesale distributors in Illinois, Ohio, New York, and Pennsylvania and are not ordinarily sold for home use.

Because the implicated mushrooms were used in their frozen food products, 2 companies issued a recall of these products on February 17 and 18. Stouffer's Food Company, Solon, Ohio, recalled 4 products—Tuna Noodle Casserole,

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Escalloped Chicken and Noodles Casserole, Green Beans and Mushroom Casserole, and Cream of Mushroom Soup; Fabbrini Family Foods, Inc., Ossinike, Michigan, recalled Frozen Mushroom Pizza.

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	7th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 7 WEEKS		
	February 17, 1973	February 19, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	27	47	45	264	265	205
Brucellosis	1	—	1	12	13	8
Chickenpox	5,223	3,951	—	32,147	22,993	—
Diphtheria	5	5	4	16	12	18
Encephalitis, primary:						
Arthropod-borne and unspecified	12	27	24	106	117	137
Encephalitis, post-infectious	4	7	6	24	33	44
Hepatitis, serum (Hepatitis B)	155	234	104	942	1,284	872
Hepatitis, infectious (Hepatitis A)	926	1,213	1,094	6,625	7,620	7,559
Malaria	7	34	34	24	254	307
Measles (rubeola)	672	791	791	4,136	4,454	4,454
Meningococcal infections, total	30	42	68	200	257	461
Civilian	30	40	64	192	248	441
Military	—	2	4	8	9	28
Mumps	1,948	2,172	2,849	12,277	14,597	17,462
Rubella (German measles)	593	681	1,003	2,866	3,520	4,583
Tetanus	—	1	1	7	7	8
Tuberculosis, new active	549	626	—	3,657	3,642	—
Tularemia	3	2	1	13	14	12
Typhoid fever	3	3	3	24	29	29
Typhus, tick-borne (Rky. Mt. spotted fever)	—	—	—	3	9	3
Venereal Diseases:						
Gonorrhea	13,489	12,882	—	99,321	89,846	—
Syphilis, primary and secondary	499	468	—	3,643	2,973	—
Rabies in animals	65	72	71	389	454	454

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	—	Poliomyelitis, total:	—
Botulism:	—	Paralytic:	—
Congenital rubella syndrome: *Mich. - 1	4	Psittacosis:	2
Leprosy: Calif. - 3, Tex. - 2	8	Rabies in man:	—
Leptospirosis: P.R. - 1	5	Trichinosis: Ohio - 2	8
Plague:	—	Typhus, murine: Tex. - 1	1

\*Delayed report: Congenital rubella syndrome: Calif. - 1

## BOTULINAL TOXIN – Continued

No cases of confirmed botulism related to this contamination have been reported to CDC by state, county, or local health departments. Any questions regarding potential exposure should be directed to local and state health officials.

(Reported by the Field Investigations Branch, Food and Drug Administration; and the Bacterial Diseases Branch, Epidemiology Program, CDC.)

## Editorial Note

Commercial foods are rarely implicated in outbreaks of foodborne botulism. This is the 1st commercial product known to have been contaminated with botulinal toxin in the past 18 months. No confirmed cases of botulism have

been reported as a result of the current incident probably because the canned mushrooms and commercial products are usually cooked before being eaten. Botulinal toxin is readily inactivated at temperatures reached by following the directions for cooking given on the product labels. CDC stores and distributes trivalent (Connaught) botulinal antitoxin. Requests for this drug or laboratory services should be made by telephone:

Monday-Friday 7:30 a.m.-5:00 p.m. (404) 633-3311,  
ext. 3753-3756

Nights, Weekends, and Holidays (404) 633-2176,  
633-8673

## SURVEILLANCE SUMMARY

## MENINGOCOCCAL DISEASE – United States, Canada, EY 1972

## United States

In epidemiologic year (EY) 1972 (35th week of 1971 through 34th week of 1972), 1,436 cases of meningococcal disease from the United States were reported to CDC, a decrease of 40% from the 2,398 cases reported in EY 1971. The incidence of reported meningococcal disease in EY 1972, 0.7 cases/100,000/year, was the lowest rate for the United States since 1915. The winter-spring incidence peak experienced in previous years was considerably blunted in EY 1972 (Figure 1).

Cases of meningococcal disease are reported by states to CDC as either "civilian" or "military-associated."\* The incidence of reported civilian meningococcal disease declined from 1.0 cases/100,000/year in EY 1971 to 0.7 cases/100,000/year in EY 1972. This decrease in civilian disease was experienced in all states except Virginia, Washington, and West Virginia, which reported increases from EY 1971 to EY 1972.

Two-hundred-forty isolates from civilian cases in the United States were received by CDC for serotyping and antimicrobial sensitivity testing in EY 1972 (Tables 1 and 2); 130 (54.1%) were serogroup C, and 107 (82.3%) of these

\*Includes cases occurring in military personnel, on military installations, or in military dependents.

were resistant to 1.0 mg% sulfadiazine; 87 (36.2%) were serogroup B, and 5 (5.7%) were sulfa-resistant; 15 (6.2%) were serogroup Y, and none were sulfa-resistant. These proportions correspond generally to those of the past 3 years. Approximately the same percentages of specific serogroups were received from all geographic areas within the United States.

Three cases of serogroup A meningococcal disease occurring in the United States were reported in EY 1972; 2 were from Massachusetts and 1 from Colorado, and only 1 of

Table 1  
Serogroups of Isolates Received by CDC\* – EY 1972

Serogroup	Civilian	Military
A	3	0
B	87	2
C	130	1
Y	15	2
Z	1	0
Other		
Non-group	3	1
Unknown	1	0
Total	240	6

\*Sources: blood or cerebrospinal fluid – 240  
eye – 4  
joint – 2

Table 2  
Sulfonamide and Rifampin Resistance of Isolates from Civilians  
EY 1972

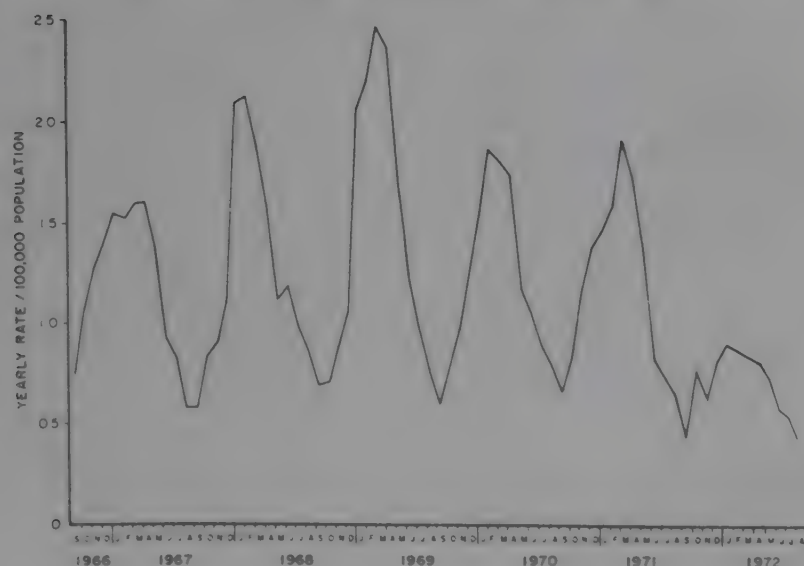
Serogroup	Total	Sulfonamide-Resistant*		Rifampin-Resistant**	
		Number	Percent	Number	Percent
A	3	0	0.0	0	0.0
B	87	5	5.7	2	2.3
C	130	107	82.3	1	0.8
Y	15	0	0.0	1	6.7
Z	1	0	0.0	0	0.0
Other	4	0	0.0	0	0.0
Total	240	112	46.7	4	1.7

\*to 10 mcg/ml sulfadiazine

\*\*to .25 mcg/ml rifampin

Figure 1

MENINGOCOCCAL DISEASE ATTACK RATES, BY MONTH  
UNITED STATES – EPIDEMIOLOGIC YEARS, 1967-1972



these individuals had had exposure overseas or in Canada. Isolates from these 3 patients were all sensitive to 1.0 mg% sulfadiazine.

In 1971, the age distribution of patients with meningococcal disease was similar to that in previous years. The highest civilian attack rates were reported in children less than 1 year of age (9.5 cases/100,000/year) (Figure 2). The rise in the incidence curve in the 15- to 20-year age group was seen again in 1971, even when cases reported as "military-associated" were removed.

The number of "military-associated" cases reported to CDC decreased from 334 in EY 1971 to 78 in EY 1972. The administration of Group C polysaccharide vaccine to all Army and Navy recruits began in October 1971, but Army trials with the vaccine were in progress as early as 1968.

(Reported by the Special Pathogens Section, Bacterial Diseases Branch, Epidemiology Program; the Antimicrobial Investigations Unit and the Special Bacteriology Unit, Clinical Bacteriology Section, Bacteriology Branch, Laboratory Division, CDC.)

### Canada

In EY 1972, Canada experienced an increase in the reported cases of meningococcal disease in 8 of 12 provinces; the other 4 showed no change or a decrease in incidence. The reported incidence rate more than quadrupled from EY 1971 to EY 1972 in Newfoundland, tripled in British Columbia, and doubled in Quebec, Ontario, and Alberta. The overall reported incidence for Canada increased from 0.9 to 1.4/100,000/year.

In 1970 and 1971, Group A meningococci accounted for approximately 60% of the reported meningococcal cases in Manitoba (MMWR, Vol. 21, No. 11), and 7 of 20 cerebrospinal fluid or blood meningococcal isolates from Ontario in EY 1972 were Group A. None of the 21 Manitoba Group A isolates examined in 1970-71 were resistant to sulfadiazine (1.0 mg%). It seems possible that Group A disease may be the cause of rising attack rates in other parts of Canada.

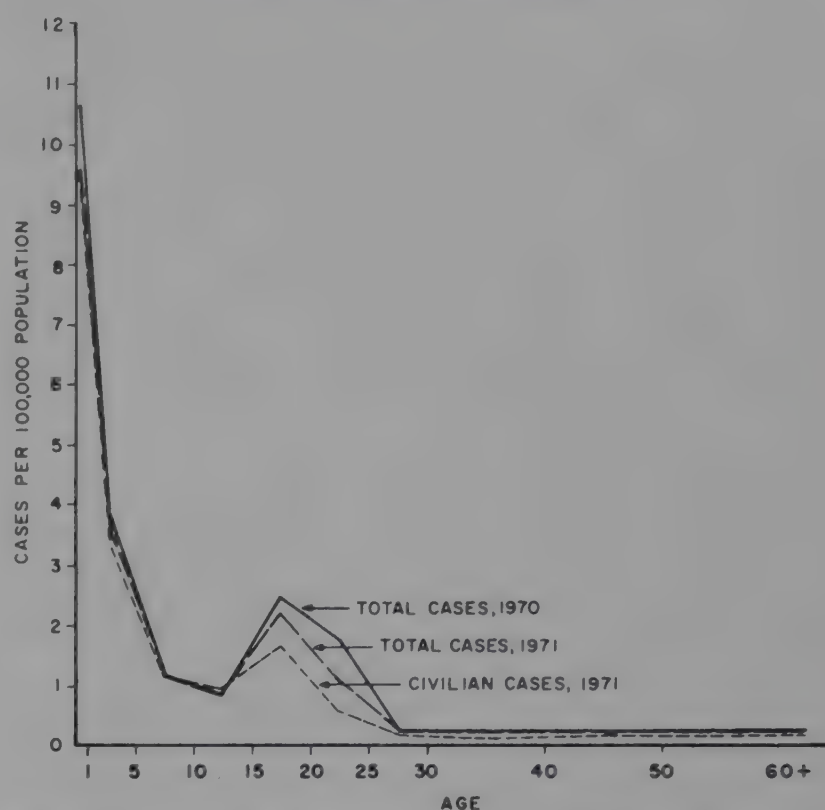
(Reported by L. Greenberg, Ph.D., Chief, Biologics Control Laboratories, Laboratory Centre for Disease Control, Ottawa, Ontario, Canada; and Notifiable Diseases—Weekly Summary, Public Health Section, Health and Welfare Division, Statistics Canada, Ottawa, Canada.)

### Editorial Note

While the rate of reported civilian meningococcal disease in the United States decreased from EY 1971 to EY 1972, the relative proportions of serogroups tested at CDC from civilian cases did not change. Moreover, the fall in case rates occurred in nearly every state, and specific meningococcal serogroups showed no tendency toward geographic clustering. There are no data to suggest that the fall in civilian incidence of meningococcal disease is related to the use of serogroup C polysaccharide vaccine in the military.

The juxtaposition of a falling incidence of meningococcal disease in the United States with an increasing incidence in Canada is of great interest, largely because of the occurrence of many serogroup A cases in Manitoba and Ontario, and presumably in other Canadian provinces. The appearance of large numbers of serogroup A cases in the northern hemisphere for the 1st time in over 2 decades is of concern, since this serogroup has been responsible for major epidemics in the

Figure 2  
MENINGOCOCCAL DISEASE ATTACK RATES, BY AGE\*  
UNITED STATES — 1970 AND 1971



\*AGE KNOWN FOR 2,505 CASES IN 1970, 1,994 CIVILIAN AND 268 MILITARY-ASSOCIATED CASES IN 1971

past. Only 1 of the 5 reported cases of serogroup A disease in United States residents in the past 18 months had known Canadian exposure.

The importance of case reporting and serogrouping of isolates is increased by the development of serogroup A and serogroup C meningococcal polysaccharide vaccines. The efficacy of the serogroup C vaccine is being examined in a group of children (6-35 months of age) in São Paulo, Brazil, by local health authorities with the assistance of the Pan American Health Organization. The serogroup C vaccine has been demonstrated to prevent meningococcal disease among military recruits (1). In addition, a World Health Organization-sponsored field trial of serogroup A vaccine in children is being conducted in Egypt.

Chemotherapy is indicated to eradicate the meningococcal carrier state in household contacts of patients with meningococcal disease. Sulfadiazine was the preferred agent until recent years when sulfa-resistant meningococci became responsible for most meningococcal disease in the United States. Of a large number of drugs tested, only rifampin and minocycline have been shown to be significantly effective in eradicating the meningococcal carrier state in adults, and there are no published data concerning the efficacy of these drugs when used for this purpose in children. Both of these antibiotics are now approved by the Food and Drug Administration for use in eradicating the meningococcal carrier state in adults.

### Reference

1. Artenstein MS, Gold R, Zimmerly JG, Wyle FA, Schneider H, Harkins C: Prevention of meningococcal disease by group C polysaccharide vaccine. *New Eng J Med* 282:417-420, 1970

### EPIDEMIOLOGIC NOTES AND REPORTS

#### FOLLOW-UP ON DENGUE-2 INFECTION — Puerto Rico

Following confirmation of dengue-2 activity in the summer of 1972 (MMWR, Vol. 21, No. 44), 2 additional house-to-house morbidity and *Aedes aegypti* surveys were conducted in the Guánica-Ensenada area on October 16 and 17 and on November 21 and 22. From data obtained during the 4 surveys, a composite epidemic curve was drawn (Figure 3). The overall febrile illness attack rate for the 5 1/2-month period was 331/1,000 population. Dengue-2 infection was confirmed serologically in 35 (56%) of 62 febrile patients in the survey population from whom paired sera were obtained. Positive serology was no more frequent in patients with fever and rash or with fever, rash, and body pain than in patients with fever alone.

Larval and adult *A. aegypti* control efforts began 1 week before the 3rd survey in October. Two groups of premises were examined in the 2nd and 3rd surveys to evaluate the efficacy of treatment of water containers with an organophosphate larvicide. Larvicides were applied to containers in a group of 96 premises between the 2nd and 3rd surveys, while another group of 134 premises received no treatment. Notable success was achieved in eliminating larvae from 50-gallon barrels (Table 3) in the treated group. Part of the increase in positive containers in the untreated group (Table 4)

Figure 3  
FEBRILE ILLNESS ATTACK RATES, BY DATE OF ONSET  
GUANICA-ENSENADA, PUERTO RICO  
JUNE 1-NOV. 12, 1972

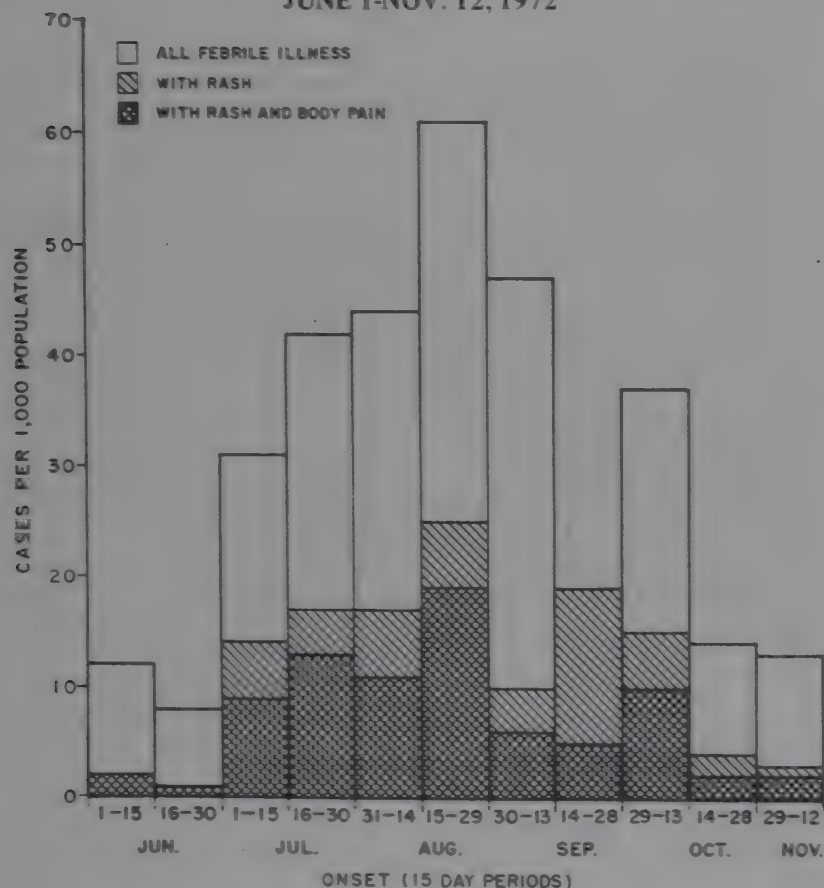


Table 3  
Types of Containers with *Aedes aegypti* Larvae From  
96 Premises Before and After Larvicidal Treatment  
Guánica-Ensenada, Puerto Rico — September-October 1972

Type of Container	Number of Positive Containers	
	2nd Survey (Before Treatment)	3rd Survey (After Treatment)
50-gallon barrels	16	0
1- to 5-gallon cans	7	5
Animal watering pans	1	6
Old tires	0	6
Buckets	4	4
Miscellaneous	1	6
Total	38	27

Table 4  
Types of Containers with *Aedes aegypti* Larvae From  
134 Premises Receiving No Larvicidal Treatment  
Guánica-Ensenada, Puerto Rico — September-October 1972

Type of Container	Number of Positive Containers	
	2nd Survey	3rd Survey
50-gallon barrels	13	16
1- to 5-gallon cans	9	15
Animal watering pans	3	12
Old tires	7	18
Buckets	1	9
Miscellaneous	3	12
Total	36	82

is attributable to unusually heavy rains which fell during the 3 weeks prior to the 3rd survey.

The premise index (percent of premises positive for *A. aegypti* larvae) rose from 17.8% in the 2nd survey to 33.3% in the 3rd, then fell to 10.2% in the 4th survey. Numbers of adult *A. aegypti* collected per man-hour during the 2nd, 3rd, and 4th surveys were 2.7, 4.0, and 0.7, respectively.

Small foci of dengue-2 activity have now been identified in Sabana Grande and Juana Díaz, west and east of Guánica. *A. aegypti* control measures are in progress in these towns.

(Reported by Luis E. Mainardi, M.D., Chief, Communicable Disease Control Program, Puerto Rico Health Department; the San Juan Tropical Disease Laboratories, Ecological Investigations Program; the Arbovirology Section, Virology Branch, Laboratory Division, CDC; an EIP Officer and an EIS Officer.)

#### Editorial Note

Endemic transmission of dengue-2 virus continues in Puerto Rico. Small foci of activity have now been identified through January 1973.

#### CURRENT TRENDS

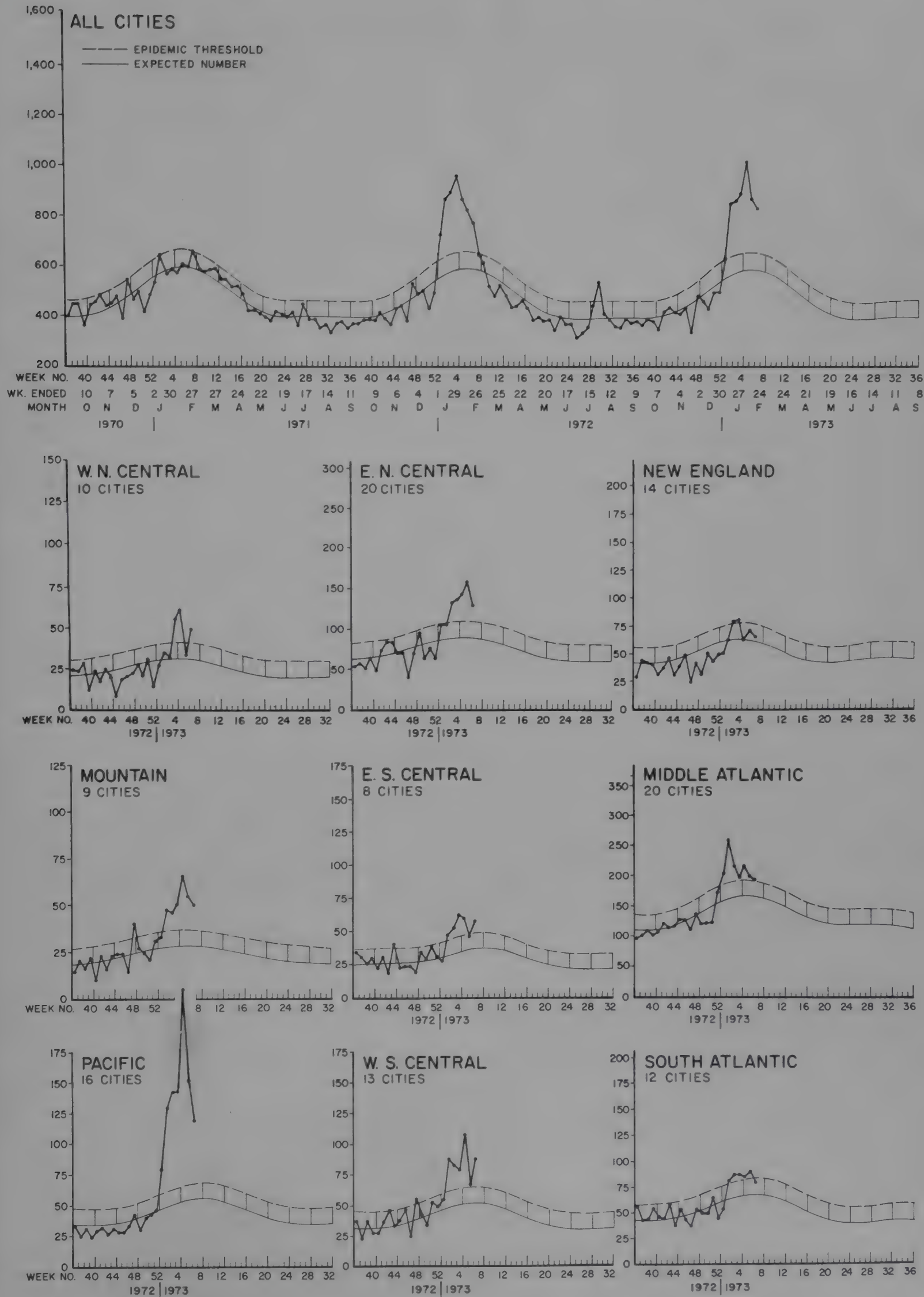
##### INFLUENZA — United States

Pneumonia-influenza related mortality reported from 122 U.S. cities has declined for the 2nd consecutive week, after reaching a peak in the week ending Feb. 3, 1973. Regionally, mortality has declined in almost all areas (Figure 4). In addition, state epidemiologists report a decrease in

the number of new influenza cases, and surveillance indices appear to be returning to normal.

(Reported by the Influenza Surveillance Unit, Viral Diseases Branch, Epidemiology Program, CDC.)

Figure 4  
PNEUMONIA-INFLUENZA DEATHS IN 122 UNITED STATES CITIES



# SURVEILLANCE SUMMARY

## FOODBORNE BOTULISM — United States, 1971-1972

In 1972, 4 outbreaks and 24 cases of foodborne botulism were reported to CDC; in 1971, there were 10 outbreaks and 23 cases (Table 5). In this 2-year period, 10 of the 47 patients died (21%). No individuals died in the largest outbreak involving 18 persons in California in August 1972. Type A *Clostridium botulinum* was responsible for 6 of the 14 outbreaks, type B for 2 outbreaks, and type E for 1 outbreak;

in 5 outbreaks, the type was unknown. There was 1 documented outbreak caused by a commercial product. In addition, 5 cases of wound botulism were reported in this period. (Reported by the Enteric Diseases Unit, Bacterial Diseases Branch, Epidemiology Program, and the Anaerobe Unit, Enterobacteriology Section, Bacteriology Branch, Laboratory Division, CDC.)

Table 5  
Outbreaks of Foodborne Botulism — United States, 1971-1972

State	Food	Place Food Processed	Toxin Type	Cases	Deaths
<u>1971</u>					
Alaska	Frozen whitefish	Home	E	2	0
Washington	Vegetables (suspected)	Home (suspected)	Unknown	2	2
New York	Antipasto	Home	A	2	0
New York	Vichyssoise Soup	Commercial	A	2	1
Pennsylvania	Peppers	Home	B	3	1
California	Unknown	Unknown	Unknown	2	0
Maryland	Unknown	Unknown	A	1	1
California	Chile peppers	Home	A	5	1
California	Bean paste	Home	B	2	0
California	Celery	Home	Unknown	2	0
Total: 10 Outbreaks				23	6
<u>1972</u>					
Ohio	Peppers	Home	Unknown	4	2
California	Unknown*	Unknown*	A	18**	0
Colorado	Peppers	Home	A	1	1
Oklahoma	Vegetables	Home	Unknown	1	1
Total: 4 Outbreaks				24	4

\*No food item could be definitely incriminated.

\*\*6 hospitalized and 12 not hospitalized

# CURRENT TRENDS

## ZOSTER IMMUNE GLOBULIN PROGRAM — United States

In 1971 and 1972, CDC conducted a nationwide program for the distribution of zoster immune globulin (ZIG) through its regional consultant system (MMWR, Vol. 20, No. 39). Between Jan. 1 and Dec. 31, 1972, 326 requests for ZIG were received by CDC or its regional consultants, and 58 high-risk children were treated with the drug. However, the supply of ZIG had been exhausted by June 1972; now the drug is again available for distribution.

ZIG is indicated for the treatment of high-risk, susceptible children who have had close exposure to an active case of varicella within the preceding 72 hours. Children at high-risk of severe varicella include those with immunodeficiency diseases, leukemia, or lymphoma, or those taking immunosuppressive medications. Any child fulfilling the necessary criteria is eligible for ZIG prophylaxis. Because ZIG is an investigational drug distributed under protocol, the patient's physician is required to supply clinical follow-up for 30 days after treatment, as well as serum samples taken before treatment and 24 hours and 4 weeks after treatment.

In 1972, ZIG was released at a constant 5 ml dose regardless of the weight of the recipient, but this year the dosage schedule has been modified to take this factor into account (Table 6). ZIG will be packaged in 1.25 ml vials, but the maximum dose will remain 5 ml.

Table 6  
Zoster Immune Globulin Dosage Schedule, by Weight of Recipient

Body Weight		ZIG Dose	
Pounds	Kilograms	Milliliters	Vials
0.0-14	0.0-6.2	1.25	1
14.1-28	6.3-12.5	2.50	2
28.1-41	12.6-18.7	3.75	3
over 41	over 18.7	5.00	4

When requesting ZIG, the child's weight must be reported to the ZIG consultant, who will authorize the appropriate number of vials to be released. ZIG is stored in 12 regional locations and can be delivered within 24 hours to any airport in the United States. Requests should be made through the regional consultants (Table 7).

(Reported by the Immunization Branch, State and Community Services Division, CDC.)

### Editorial Note

It is imperative that an adequate supply of zoster immune plasma be obtained by CDC if sufficient supplies of ZIG are to be available for year-round distribution. Information regarding plasma donation can be obtained from the ZIG Program, Immunization Branch, CDC.

Table 7  
ZIG Regional Consultants and Alternates

Region	Consultant	Alternate
New England	Adolf W. Karchmer, M.D. Infectious Disease Unit Mass. Gen. Hosp. Boston, Mass. 02114 Office: (617) 726-3812 Home: (617) 237-3646	Martin S. Hirsch, M.D. Office: (617) 726-3812 Home: (617) 864-8030
Mid-Atlantic	Philip A. Brunell, M.D. Ann Gershon, M.D. N. Y. Univ. Med. Ctr. N.Y., N.Y. 10016 Office: (212) 561-5259 Home: (212) 369-5126 (Dr. Gershon)	Anthony Brickman, M.D. Office: (212) 561-5259 Home: (212) 677-8706
Mideast	Richard G. Judelsohn, M.D. Private Practice of Pediatrics Buffalo, N. Y. 14209 Office: (716) 884-8018 Home: (716) 688-3579	
Southeast & National	Joel D. Meyers, M.D. A. David Brandling-Bennett, M.D. CDC, Atlanta, Ga. 30333 Office: (404) 633-3311, ext. 3736 Night: (404) 633-2176 Home: (404) 237-3204 (Dr. Meyers) Home: (404) 636-5277 (Dr. Bennett)	C. Clinton Campbell, M.D. Office: (404) 633-3311, ext. 3736 Home: (404) 373-2866 J. Lyle Conrad, M.D. Office: (404) 633-3311, ext. 3743 Home: (404) 636-3902
Midwest	Richard Hong, M.D. Univ. of Wis. Med. Ctr. Madison, Wis. 53706 Office: (608) 262-6954 Home: (608) 836-8189	Shin-Wen Huang, M.D. Office: (608) 262-6954 Home: (608) 238-2497 Robert Levy, M.D. Office: (608) 262-6954 Home: (608) 271-7787
Mountain	Kenneth McIntosh, M.D. Dept. of Pediatrics Univ. of Colo. Sch. of Med. Denver, Colo. 80220 Office: (303) 394-8501 Home: (303) 388-0538	C. Henry Kempe, M.D. Office: (303) 394-8371 Home: (303) 322-4457
Pacific	Moses Grossman, M.D. Univ. of Calif. Service San Francisco Gen. Hosp. San Francisco, Calif. 94110 Office: (415) 648-8200, ext. 441 Home: (415) 681-0475	Delmer Pascoe, M.D. Office: (415) 648-8200, ext. 441 Home: (415) 562-3242

#### GONORRHEA SCREENING AMONG FEMALES – United States, July-December 1972

Gonorrhea screening programs are undergoing rapid expansion throughout the country, primarily as a result of increased federal grant funds which were received by all States late in fiscal year 1972. Table 8 reflects the results of such screening, by type of health care facility securing the specimen, in July, August, and September 1972. Overall, positivity rates were highest in venereal disease clinics, even when known contacts to gonorrhea are excluded. Almost 85% of the tests performed, however, were taken in settings other than venereal disease clinics, and in these, positivity rates ranged from

9.3% among enrollees in manpower training programs to 1.1% among females tested at military installations. The positivity rate for all clinics was 6.5%.

Preliminary data indicate that an additional 993,555 females were tested by all types of health care facilities in October, November, and December 1972. The overall positivity rate for all sources was 5.2%.

(Reported by the Venereal Disease Branch, State and Community Services Division, CDC.)

(See Table 8, page 68)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING FEBRUARY 17, 1973 AND FEBRUARY 19, 1972 (7th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES .....	27	1	5,223	5	16	12	27	4	155	926	1,213
NEW ENGLAND .....	1	-	592	-	2	-	-	-	2	63	64
Maine*	-	-	-	-	-	-	-	-	-	1	5
New Hampshire .....	-	-	13	-	-	-	-	-	-	1	8
Vermont .....	-	-	31	-	-	-	-	-	-	5	2
Massachusetts .....	-	-	251	-	2	-	-	-	-	24	32
Rhode Island .....	1	-	77	-	-	-	-	-	-	14	6
Connecticut .....	-	-	220	-	-	-	-	-	2	18	11
MIDDLE ATLANTIC .....	1	-	244	-	-	-	3	-	33	125	192
Upstate New York .....	-	-	3	-	-	-	1	-	3	26	36
New York City .....	-	-	107	-	-	-	1	-	8	31	42
New Jersey .....	1	-	NN	-	-	-	-	-	15	43	86
Pennsylvania .....	-	-	134	-	-	-	1	-	7	25	28
EAST NORTH CENTRAL .....	3	-	1,727	-	-	6	6	1	21	148	174
Ohio *	-	-	370	-	-	1	1	-	4	43	38
Indiana .....	-	-	82	-	-	-	-	-	-	8	14
Illinois .....	1	-	-	-	-	3	-	1	7	28	49
Michigan .....	2	-	301	-	-	2	5	-	8	62	68
Wisconsin .....	-	-	974	-	-	-	-	-	2	7	5
WEST NORTH CENTRAL .....	3	1	729	-	3	1	5	-	-	30	33
Minnesota *	3	-	2	-	-	-	-	-	-	2	6
Iowa *	-	-	649	-	-	1	-	-	-	3	5
Missouri .....	-	1	2	-	-	-	3	-	-	11	6
North Dakota .....	-	-	27	-	-	-	-	-	-	2	1
South Dakota .....	-	-	-	-	3	-	-	-	-	1	6
Nebraska .....	-	-	25	-	-	-	-	-	-	-	7
Kansas .....	-	-	24	-	-	-	2	-	-	11	2
SOUTH ATLANTIC .....	11	-	549	-	-	1	4	1	25	129	174
Delaware .....	-	-	8	-	-	-	-	-	2	5	-
Maryland .....	-	-	15	-	-	-	1	-	2	16	29
District of Columbia .....	-	-	2	-	-	-	-	-	-	3	6
Virginia .....	1	-	1	-	-	-	1	-	2	6	17
West Virginia *	-	-	495	-	-	-	-	1	1	5	13
North Carolina *	3	-	NN	-	-	-	-	-	3	41	32
South Carolina .....	-	-	28	-	-	-	1	-	1	9	-
Georgia .....	-	-	-	-	-	-	-	-	-	7	16
Florida .....	7	-	-	-	-	1	1	-	14	37	61
EAST SOUTH CENTRAL .....	1	-	275	-	-	-	4	-	6	74	70
Kentucky .....	-	-	232	-	-	-	1	-	4	28	28
Tennessee .....	-	-	NN	-	-	-	2	-	-	35	24
Alabama .....	-	-	23	-	-	-	1	-	-	4	13
Mississippi .....	1	-	20	-	-	-	-	-	2	7	5
WEST SOUTH CENTRAL .....	2	-	535	1	2	-	2	-	13	122	113
Arkansas *	-	-	6	-	-	-	-	-	-	2	7
Louisiana *	2	-	NN	-	-	-	-	-	1	26	7
Oklahoma .....	-	-	60	-	-	-	1	-	2	22	7
Texas .....	-	-	469	1	2	-	1	-	10	72	92
MOUNTAIN .....	-	-	114	-	-	-	-	-	16	54	101
Montana .....	-	-	14	-	-	-	-	-	-	7	6
Idaho .....	-	-	-	-	-	-	-	-	2	14	2
Wyoming .....	-	-	44	-	-	-	-	-	-	2	-
Colorado *	-	-	36	-	-	-	-	-	2	13	50
New Mexico .....	-	-	8	-	-	-	-	-	-	9	16
Arizona .....	-	-	-	-	-	-	-	-	-	-	19
Utah .....	-	-	12	-	-	-	-	-	12	9	7
Nevada .....	-	-	-	-	-	-	-	-	-	-	1
PACIFIC .....	5	-	458	4	9	4	3	2	39	181	292
Washington .....	-	-	393	4	8	-	-	-	1	15	35
Oregon .....	-	-	1	-	-	-	-	-	2	28	23
California*	5	-	-	-	1	4	3	2	36	131	223
Alaska *	-	-	41	-	-	-	-	-	-	-	2
Hawaii .....	-	-	23	-	-	-	-	-	-	7	9
Guam .....	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	-	30	-	-	-	-	-	-	33	7
Virgin Islands .....	-	-	2	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: Calif. 6, (1972) Minn. 12  
Brucellosis: Calif. 1  
Chickenpox: Me. 14, Ark. 4, Colo. 56, Alaska 7

Diphtheria: Ohio delete 1  
Encephalitis, primary: Iowa 7, Calif. 5, (1972) Minn. 2,  
N.C. delete 1

Encephalitis, post-infectious: Iowa 3  
Hepatitis B: Ark. 1, Calif. 34  
Hepatitis A: Ohio delete 1, Ark. 3, La. 9, Colo. 5, Calif. 141,  
Alaska 1, (1972) Minn. 1, W. Va. delete 3

# Morbidity and Mortality Weekly Report

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING FEBRUARY 17, 1973 AND FEBRUARY 19, 1972 (7th WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES . . . . .	7	24	672	4,136	4,454	30	200	257	1,948	12,277	593	2,866
NEW ENGLAND . . . . .	1	2	310	1,728	227	—	11	10	78	487	53	282
Maine *	—	—	—	8	29	—	—	1	—	15	—	10
New Hampshire . . . . .	—	—	29	286	17	—	1	—	6	27	2	6
Vermont . . . . .	1	1	—	26	39	—	—	—	—	77	—	5
Massachusetts . . . . .	—	—	155	859	15	—	5	5	30	197	39	151
Rhode Island . . . . .	—	—	30	148	41	—	—	4	21	51	—	6
Connecticut . . . . .	—	1	96	401	86	—	5	—	21	120	12	104
MIDDLE ATLANTIC . . . . .	1	4	58	319	338	4	27	25	150	1,081	10	308
Upstate New York . . . . .	—	2	25	56	21	—	7	8	NN	NN	3	37
New York City . . . . .	—	—	33	196	53	—	6	6	103	665	3	27
New Jersey . . . . .	1	1	—	46	250	1	6	5	35	244	—	224
Pennsylvania . . . . .	—	1	—	21	14	3	8	6	12	172	4	20
EAST NORTH CENTRAL . . . . .	1	2	149	1,126	1,863	5	18	28	450	3,550	100	661
Ohio . . . . .	—	—	12	61	55	2	12	11	86	467	12	81
Indiana . . . . .	—	—	4	96	473	—	1	4	10	290	12	145
Illinois . . . . .	1	1	51	396	562	—	1	4	105	678	11	86
Michigan . . . . .	—	1	53	356	267	3	4	8	118	1,008	25	137
Wisconsin . . . . .	—	—	29	217	506	—	—	1	131	1,107	40	212
WEST NORTH CENTRAL . . . . .	—	—	10	105	197	—	16	18	142	1,069	81	316
Minnesota *	—	—	—	7	4	—	—	1	1	27	6	19
Iowa *	—	—	10	81	113	—	3	—	133	807	12	66
Missouri . . . . .	—	—	—	3	56	—	8	2	4	113	57	165
North Dakota . . . . .	—	—	—	6	17	—	—	—	2	20	3	21
South Dakota . . . . .	—	—	—	—	2	—	2	1	—	3	1	2
Nebraska . . . . .	—	—	—	1	5	—	—	4	2	29	2	26
Kansas . . . . .	—	—	—	7	—	—	3	10	—	70	—	17
SOUTH ATLANTIC . . . . .	—	4	20	126	461	6	32	55	200	1,323	24	215
Delaware . . . . .	—	—	—	1	2	—	—	1	10	80	—	1
Maryland . . . . .	—	—	—	—	3	—	9	4	20	190	—	2
District of Columbia . . . . .	—	—	—	1	—	—	1	2	1	5	—	1
Virginia . . . . .	—	3	2	11	3	—	3	12	8	126	—	6
West Virginia . . . . .	—	—	2	27	22	—	—	5	95	501	13	42
North Carolina . . . . .	—	1	1	4	15	2	9	12	NN	NN	—	4
South Carolina . . . . .	—	—	3	14	58	—	2	7	2	52	3	9
Georgia . . . . .	—	—	—	7	20	3	6	—	—	7	—	3
Florida . . . . .	—	—	12	61	338	1	2	12	64	362	8	147
EAST SOUTH CENTRAL . . . . .	—	1	3	97	218	1	13	23	393	1,012	124	225
Kentucky . . . . .	—	—	—	20	107	—	4	5	84	243	92	120
Tennessee . . . . .	—	—	1	56	27	1	6	11	57	318	29	89
Alabama . . . . .	—	1	—	—	49	—	2	6	19	130	1	8
Mississippi . . . . .	—	—	2	21	35	—	1	1	233	321	2	8
WEST SOUTH CENTRAL . . . . .	2	5	37	184	257	7	30	35	158	867	40	213
Arkansas *	—	—	—	4	6	—	2	6	3	28	—	8
Louisiana . . . . .	1	1	—	13	6	1	3	11	6	8	—	—
Oklahoma . . . . .	—	—	—	4	2	—	2	—	5	42	7	20
Texas . . . . .	1	4	37	163	243	6	23	18	144	789	33	185
MOUNTAIN . . . . .	1	2	14	73	321	—	8	4	91	671	25	146
Montana . . . . .	1	1	—	1	6	—	1	—	20	62	—	8
Idaho . . . . .	—	—	4	13	3	—	—	2	6	31	—	4
Wyoming . . . . .	—	—	—	1	—	—	—	1	25	166	—	—
Colorado *	—	—	5	17	186	—	2	—	18	55	17	65
New Mexico . . . . .	—	1	3	33	18	—	1	1	14	226	1	16
Arizona . . . . .	—	—	2	8	64	—	1	—	—	98	—	7
Utah . . . . .	—	—	—	—	44	—	1	—	8	31	7	45
Nevada . . . . .	—	—	—	—	—	—	2	—	—	2	—	1
PACIFIC . . . . .	1	4	71	378	572	7	45	59	286	2,217	136	500
Washington . . . . .	—	—	41	198	145	—	3	6	43	227	10	71
Oregon . . . . .	—	—	7	70	9	—	2	3	81	492	24	101
California *	1	4	22	106	402	7	39	49	149	1,307	101	324
Alaska *	—	—	—	—	3	—	1	—	12	161	—	—
Hawaii . . . . .	—	—	1	4	13	—	—	1	1	30	1	4
Guam . . . . .	—	—	—	2	—	—	—	1	—	1	—	1
Puerto Rico . . . . .	—	—	93	281	47	—	—	—	33	113	1	7
Virgin Islands . . . . .	—	—	—	—	—	—	—	2	—	2	—	—

\*Delayed reports: Malaria: Calif. 1  
Measles: Me. 2, Iowa delete 4, Ark. delete 2,  
Colo. 2, Calif. 25

Meningococcal infections: Ark. 1, Calif. 7, Alaska 1,  
(1972) Minn. 1

Mumps: Me. 2, Ark. 3, Colo. 4, Calif. 202,  
Alaska 59, (1972) Minn. 1  
Rubella: Me. 2, Colo. 7, Calif. 49

## Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING FEBRUARY 17, 1973 AND FEBRUARY 19, 1972 (7th WEEK) – Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
		Cumulative 1973	1973		Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)
	1973			1973								
UNITED STATES . . . . .	7	549	3,657	13	3	24	—	3	13,489	499	65	389
NEW ENGLAND . . . . .	—	8	114	—	—	1	—	—	276	12	2	19
Maine . . . . .	—	2	9	—	—	—	—	—	16	—	2	19
New Hampshire . . . . .	—	—	1	—	—	—	—	—	10	—	—	—
Vermont . . . . .	—	1	3	—	—	—	—	—	2	—	—	—
Massachusetts . . . . .	—	4	66	—	—	1	—	—	165	4	—	—
Rhode Island * . . . . .	—	1	8	—	—	—	—	—	24	—	—	—
Connecticut . . . . .	—	—	27	—	—	—	—	—	59	8	—	—
MIDDLE ATLANTIC . . . . .	2	129	727	—	—	4	—	1	1,290	96	—	4
Upstate New York* . . . . .	—	23	167	—	—	—	—	—	243	12	—	1
New York City . . . . .	1	45	244	—	—	4	—	—	532	55	—	—
New Jersey . . . . .	1	32	153	—	—	—	—	—	246	22	—	—
Pennsylvania * . . . . .	—	29	163	—	—	—	—	1	269	7	—	3
EAST NORTH CENTRAL . . . . .	1	80	552	1	—	2	—	—	1,508	31	4	33
Ohio . . . . .	—	24	228	1	—	1	—	—	463	6	—	9
Indiana . . . . .	—	20	72	—	—	—	—	—	186	—	2	4
Illinois . . . . .	—	24	142	—	—	—	—	—	64	6	—	8
Michigan . . . . .	—	12	88	—	—	1	—	—	569	13	—	—
Wisconsin . . . . .	1	—	22	—	—	—	—	—	226	6	2	12
WEST NORTH CENTRAL . . . . .	2	23	129	2	—	—	—	1	530	6	21	118
Minnesota . . . . .	—	5	10	—	—	—	—	—	50	3	5	42
Iowa . . . . .	—	6	21	—	—	—	—	—	101	—	8	39
Missouri . . . . .	2	6	57	2	—	—	—	1	185	—	3	12
North Dakota . . . . .	—	—	4	—	—	—	—	—	19	—	4	21
South Dakota . . . . .	—	1	11	—	—	—	—	—	30	—	—	3
Nebraska . . . . .	—	2	11	—	—	—	—	—	58	—	—	—
Kansas . . . . .	—	3	15	—	—	—	—	—	87	3	1	1
SOUTH ATLANTIC . . . . .	1	108	760	2	1	5	—	—	3,876	161	8	40
Delaware . . . . .	—	—	9	—	—	—	—	—	65	—	—	—
Maryland . . . . .	—	16	84	—	—	—	—	—	279	31	1	2
District of Columbia . . . . .	—	4	39	—	—	—	—	—	254	20	—	—
Virginia . . . . .	—	10	102	1	—	—	—	—	356	48	3	16
West Virginia . . . . .	—	6	32	—	—	—	—	—	62	—	2	7
North Carolina . . . . .	—	29	132	1	—	1	—	—	710	9	—	—
South Carolina . . . . .	—	12	92	—	—	1	—	—	264	17	—	—
Georgia . . . . .	—	12	114	—	—	1	—	—	777	17	2	9
Florida . . . . .	1	19	156	—	1	2	—	—	1,109	19	—	6
EAST SOUTH CENTRAL . . . . .	1	63	312	4	—	1	—	1	1,139	29	13	87
Kentucky . . . . .	—	8	72	1	—	—	—	—	204	8	6	33
Tennessee . . . . .	—	17	83	3	—	—	—	—	441	9	5	36
Alabama . . . . .	1	31	109	—	—	1	—	1	239	5	2	18
Mississippi . . . . .	—	7	48	—	—	—	—	—	255	7	—	—
WEST SOUTH CENTRAL . . . . .	—	71	356	4	—	1	—	—	1,989	63	12	50
Arkansas . . . . .	—	5	44	1	—	—	—	—	191	5	4	12
Louisiana * . . . . .	—	18	95	—	—	—	—	—	423	18	—	3
Oklahoma . . . . .	—	6	29	2	—	1	—	—	156	2	3	11
Texas * . . . . .	—	42	188	1	—	—	—	—	1,219	38	5	24
MOUNTAIN . . . . .	—	26	123	—	—	1	—	—	552	19	—	4
Montana . . . . .	—	1	3	—	—	—	—	—	29	—	—	—
Idaho . . . . .	—	3	7	—	—	—	—	—	39	—	—	—
Wyoming . . . . .	—	2	5	—	—	—	—	—	52	2	—	—
Colorado * . . . . .	—	6	15	—	—	—	—	—	191	6	—	—
New Mexico . . . . .	—	9	30	—	—	1	—	—	148	—	—	—
Arizona* . . . . .	—	—	54	—	—	—	—	—	—	—	—	4
Utah . . . . .	—	3	4	—	—	—	—	—	19	—	—	—
Nevada . . . . .	—	2	5	—	—	—	—	—	74	11	—	—
PACIFIC . . . . .	—	41	584	—	2	9	—	—	2,329	82	5	34
Washington . . . . .	—	—	45	—	—	—	—	—	212	1	—	—
Oregon . . . . .	—	3	24	—	1	1	—	—	202	1	—	—
California * . . . . .	—	35	474	—	1	8	—	—	1,804	77	5	32
Alaska * . . . . .	—	—	8	—	—	—	—	—	81	—	—	2
Hawaii . . . . .	—	3	33	—	—	—	—	—	30	3	—	—
Guam . . . . .	—	—	3	—	—	—	—	—	—	—	—	—
Puerto Rico . . . . .	3	16	73	—	—	—	—	—	93	22	1	5
Virgin Islands . . . . .	—	—	—	—	—	—	—	—	—	—	—	—

\*Delayed reports: TB: R.I. 1, Calif. 101  
Typhoid: Calif. 1, (1972) Pa. 1

Gonorrhea: La. 122, Colo. 146, Ariz. 105, Calif. 2181,  
Alaska 18, (1972) La. 909

Syphilis: N.Y. Ups. 2, La. delete 1, Colo. 2, Ariz. 3,  
Calif. 50, Alaska 1

Rabies: Tex. 2, Calif. 6, (1972) La. 1

# Morbidity and Mortality Weekly Report

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TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING FEBRUARY 17, 1973

Week No.

7

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
<b>NEW ENGLAND</b>	767	500	18	66	<b>SOUTH ATLANTIC</b>	1,238	655	44	79
Boston, Mass.	231	137	6	27	Atlanta, Ga.	148	67	9	15
Bridgeport, Conn.	45	34	1	5	Baltimore, Md.	167	89	8	1
Cambridge, Mass.	20	19	1	3	Charlotte, N. C.	51	23	2	—
Fall River, Mass.	34	21	—	1	Jacksonville, Fla.	85	41	2	1
Hartford, Conn.	55	35	2	1	Miami, Fla.	154	84	4	9
Lowell, Mass.	30	24	—	3	Norfolk, Va.	69	39	2	5
Lynn, Mass.	23	15	—	1	Richmond, Va.	106	58	2	14
New Bedford, Mass.	24	18	—	1	Savannah, Ga.	47	27	2	10
New Haven, Conn.	50	27	3	2	St. Petersburg, Fla.	95	76	2	1
Providence, R. I.	67	37	2	6	Tampa, Fla.	105	51	7	10
Somerville, Mass.	19	16	1	1	Washington, D. C.	171	81	2	8
Springfield, Mass.	58	23	—	8	Wilmington, Del.	40	19	2	5
Waterbury, Conn.	39	29	—	—	<b>EAST SOUTH CENTRAL</b>	824	439	59	57
Worcester, Mass.	72	55	2	7	Birmingham, Ala.	156	74	4	9
<b>MIDDLE ATLANTIC</b>	3,296	2,014	115	193	Chattanooga, Tenn.	53	33	—	7
Albany, N. Y.	52	29	1	1	Knoxville, Tenn.	54	36	—	1
Allentown, Pa.	32	20	1	4	Louisville, Ky.	132	82	3	16
Buffalo, N. Y.	155	92	8	21	Memphis, Tenn.	227	109	43	8
Camden, N. J.	50	30	3	3	Mobile, Ala.	34	17	3	3
Elizabeth, N. J.	36	20	3	2	Montgomery, Ala.	33	17	1	3
Erie, Pa.	51	33	1	10	Nashville, Tenn.	135	71	5	10
Jersey City, N. J.	77	53	2	2	<b>WEST SOUTH CENTRAL</b>	1,600	944	68	90
Newark, N. J.	58	19	3	4	Austin, Tex.	56	34	4	8
New York City, N. Y.†	1,611	996	55	84	Baton Rouge, La.	77	47	6	5
Paterson, N. J.	33	17	—	1	Corpus Christi, Tex.	31	21	4	2
Philadelphia, Pa.	491	293	14	13	Dallas, Tex.	236	125	18	9
Pittsburgh, Pa.	182	93	7	18	El Paso, Tex.	74	54	4	6
Reading, Pa.	45	37	—	6	Fort Worth, Tex.	105	63	2	6
Rochester, N. Y.	147	94	7	10	Houston, Tex.	303	161	6	7
Schenectady, N. Y.	28	25	—	5	Little Rock, Ark.	81	43	3	5
Scranton, Pa.	64	40	2	1	New Orleans, La.	185	111	1	7
Syracuse, N. Y.	88	55	6	2	Oklahoma City, Okla.*	112	71	5	4
Trenton, N. J.	32	23	1	1	San Antonio, Tex.	196	116	11	17
Utica, N. Y.	24	19	—	4	Shreveport, La.	86	52	3	12
Yonkers, N. Y.	40	26	1	1	Tulsa, Okla.	58	46	1	2
<b>EAST NORTH CENTRAL</b>	2,748	1,611	97	133	<b>MOUNTAIN</b>	579	353	21	50
Akron, Ohio	72	40	3	—	Albuquerque, N. Mex.	62	34	7	10
Canton, Ohio	49	30	1	2	Colorado Springs, Colo.	36	30	—	6
Chicago, Ill.	753	416	29	35	Denver, Colo.	142	80	7	13
Cincinnati, Ohio	176	113	8	7	Las Vegas, Nev.	22	10	—	3
Cleveland, Ohio	218	111	9	3	Ogden, Utah	25	16	1	4
Columbus, Ohio	137	84	5	14	Phoenix, Ariz.	143	82	1	6
Dayton, Ohio	103	56	2	5	Pueblo, Colo.	18	13	—	2
Detroit, Mich.	367	197	14	15	Salt Lake City, Utah	64	44	3	3
Evansville, Ind.	44	28	2	4	Tucson, Ariz.	67	44	2	3
Fort Wayne, Ind.	34	21	1	4	<b>PACIFIC</b>	1,984	1,317	52	119
Gary, Ind.	43	26	—	3	Berkeley, Calif.	23	16	—	1
Grand Rapids, Mich.	60	39	—	11	Fresno, Calif.	62	42	5	1
Indianapolis, Ind.	174	110	6	4	Glendale, Calif.	29	20	—	1
Madison, Wis.	37	20	4	9	Honolulu, Hawaii	80	48	2	2
Milwaukee, Wis.	144	106	4	2	Long Beach, Calif.	120	79	4	5
Peoria, Ill.	51	24	5	—	Los Angeles, Calif.	647	437	13	40
Rockford, Ill.	38	26	1	5	Oakland, Calif.	71	46	6	2
South Bend, Ind.	49	29	2	7	Pasadena, Calif.	30	24	—	1
Toledo, Ohio	142	96	1	3	Portland, Oreg.	173	122	5	6
Youngstown, Ohio	57	39	—	—	Sacramento, Calif.	65	31	4	2
<b>WEST NORTH CENTRAL</b>	855	570	34	49	San Diego, Calif.	138	93	1	8
Des Moines, Iowa	47	30	1	5	San Francisco, Calif.	172	97	3	4
Duluth, Minn.	41	31	2	6	San Jose, Calif.	48	32	—	—
Kansas City, Kans.	35	18	2	3	Seattle, Wash.	182	122	4	16
Kansas City, Mo.	137	88	4	4	Spokane, Wash.	87	65	4	22
Lincoln, Nebr.	39	30	1	6	Tacoma, Wash.	57	43	1	8
Minneapolis, Minn.	102	71	6	6	<b>Total</b>	13,891	8,403	508	836
Omaha, Nebr.	99	71	5	4	<b>Expected Number</b>	13,593	7,990	551	594
St. Louis, Mo.	231	146	6	6	<b>Cumulative Total (includes reported corrections for previous weeks)</b>	102,882	62,310	3,564	6,010
St. Paul, Minn.	91	62	5	8					
Wichita, Kans.	33	23	2	1					

†Delayed report for week ending Feb. 10, 1973

\*Estimate based on average percent of divisional total

## GONORRHEA SCREENING — Continued

Table 8  
Results of Gonorrhea Culture Tests on Females  
United States\* — July-September 1972

Source of Test	Number Tested	Number Positive	Percent Positive	Source of Test	Number Tested	Number Positive	Percent Positive
<b>Non-Venereal Disease Clinics</b>	<b>482,133</b>	<b>19,371</b>	<b>4.0</b>	<b>Non-VD Clinics (Cont'd)</b>			
Health Dept. Non-VD Clinic	124,646	5,531	4.4	Private Physicians	98,603	3,708	3.8
Family Planning	83,166	3,412	4.1	Private Family Planning Groups	55,792	1,419	2.5
Prenatal, Ob-Gyn	14,554	839	5.8	Group Health Clinics	2,967	133	4.5
Cancer Detection	2,834	76	2.7	Student Health Centers	6,216	168	2.7
Combinations or Other	24,092	1,204	5.0	Manpower Training Agencies	1,241	115	9.3
Public/Private Hospital				Industrial Screening	1,977	17	0.9
—Outpatient	102,599	4,591	4.5	Military/Dependents	3,022	32	1.1
Family Planning	8,421	195	2.3	Correction or Detention Centers	5,624	310	5.5
Prenatal, Ob-Gyn	21,638	1,000	4.6	Not Specified	31,471	999	3.2
Cancer Detection	1,781	39	2.2	<b>Venereal Disease Clinics</b>	<b>89,097</b>	<b>17,676</b>	<b>19.8</b>
Combinations or Other	70,759	3,357	4.7	Gonorrhea Contacts	10,718	3,005	28.0
Public/Private Hospital				Syphilis: Contact/Cluster/Reactor	500	81	16.2
—Inpatient	6,473	474	7.3	Other	77,879	14,590	18.7
Obstetric	1,258	72	5.7				
Gynecologic	65	5	7.7				
Combinations or Other	5,150	397	7.7				
Community Health Centers	41,502	1,874	4.5				
Family Planning	21,798	703	3.2				
Prenatal, Ob-Gyn	2,450	176	7.2				
Cancer Detection	581	26	4.5				
Combinations or Other	16,673	969	5.8				
				<b>Total (All Clinics)</b>	<b>571,230</b>	<b>37,047</b>	<b>6.5</b>

\*Does not include reports from Arizona, California, Idaho, Iowa, Maryland (except Baltimore), North Carolina, or South Carolina.

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In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to: Center for Disease Control  
Attn: Editor  
Morbidity and Mortality Weekly Report  
Atlanta, Georgia 30333

The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
PUBLIC HEALTH SERVICE  
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION  
CENTER FOR DISEASE CONTROL  
ATLANTA, GEORGIA 30333

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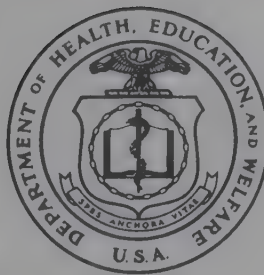
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# Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

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## EPIDEMIOLOGIC NOTES AND REPORTS SCOMBROID FISH POISONING IN CANNED TUNA FISH — United States

On Feb. 23, 1973, Star-Kist Foods, Inc., confirmed that it was recalling 2 lots of canned tuna that had been implicated in illness occurring in Minnesota, South Dakota, and Wisconsin. The recall, which was carried out under the supervision of the Food and Drug Administration (FDA), involved 6 1/2-ounce cans of Star-Kist chunk light tuna identifiable by a can code with G on the top line and D417 or D419 on the bottom line. These lots had been distributed through warehouses in Alabama, Arizona, California, Illinois, Minnesota, Missouri, Montana, New Jersey, and Oregon.

On February 26, a telephone survey of state epidemiologists was conducted by CDC. Illness associated with recent consumption of Star-Kist tuna was reported from 8 states, with symptoms including an immediate sensation of oral

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burning and blistering followed in 30-45 minutes by headache, urticaria, abdominal cramps, diarrhea, and cutaneous flushing. One hundred sixty six cases were reported from Minnesota, approximately 50 more from South Dakota, and 13 from Oregon. Additional reports of suspect cases were received from California, Nevada, Tennessee, Texas, and Wisconsin. No fatalities were reported.

Preliminary reports from FDA indicated that 9 assays for histamine revealed values ranging from 76 to 280 mg of

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	8th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 8 WEEKS		
	February 24, 1973	February 26, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	28	33	33	292	298	236
Brucellosis	4	2	2	16	15	10
Chickenpox	5,630	3,945	— — —	37,788	26,938	— — —
Diphtheria	7	6	6	23	18	26
Encephalitis, primary:						
Arthropod-borne and unspecified	12	11	17	119	128	158
Encephalitis, post-infectious	7	3	3	31	36	49
Hepatitis, serum (Hepatitis B)	115	179	109	1,058	1,463	975
Hepatitis, infectious (Hepatitis A)	870	1,100	1,033	7,509	8,720	8,592
Malaria	3	27	78	27	281	360
Measles (rubeola)	618	754	754	4,750	5,208	5,208
Meningococcal infections, total	40	40	72	240	297	538
Civilian	39	40	52	231	288	514
Military	1	—	15	9	9	43
Mumps	1,886	2,116	2,551	14,167	16,713	19,909
Rubella (German measles)	639	695	1,106	3,504	4,215	5,689
Tetanus	2	2	1	9	9	9
Tuberculosis, new active	620	656	— — —	4,276	4,298	— — —
Tularemia	1	3	2	14	17	15
Typhoid fever	1	8	4	25	37	37
Typhus, tick-borne (Rky. Mt. spotted fever)	1	—	—	4	9	3
Venereal Diseases:						
Gonorrhea	14,776	11,197	— — —	114,169	101,043	— — —
Syphilis, primary and secondary	497	403	— — —	4,141	3,376	— — —
Rabies in animals	56	75	76	448	529	529

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	—	Poliomyelitis, total:	—
Botulism:	—	Paralytic:	—
Congenital rubella syndrome: Calif. — 1	5	Psittacosis: Ore. — 1	3
Leprosy: Calif. — 1, Tex. — 1	10	Rabies in man:	—
Leptospirosis: Md. — 1	6	Trichinosis: * Conn. — 1	9
Plague:	—	Typhus, murine:	1

\* Delayed reports: Trichinosis: (1972) Alaska 1

**SCOMBROID FISH POISONING — Continued**

histamine per 100 gm of fish muscle in the incriminated lots. Assay of histamine content in a control sample of tuna from another brand revealed a histamine concentration of 2.7 mg per 100 gm.

(Reported by James Chin, M.D., State Epidemiologist, California State Department of Public Health; D. S. Fleming, M.D., State Epidemiologist, Minnesota State Department of Health; William M. Edwards, M.D., State Epidemiologist, Nevada State Department of Health and Welfare; Edward Press, M.D., State Health Officer, Oregon State Health Division; Ralph Erdmann, M.D., Director of Laboratories, St. Joseph Hospital, Mitchell, South Dakota, and Robert S. Westaby, M.D., State Epidemiologist, South Dakota State Department of Health; Robert H. Hutcheson, Jr., M.D., State Epidemiologist, Tennessee Department of Public Health; Neill Simpson, M.D., private physician, Waco, Texas, and M. S. Dickerson, M.D., State Epidemiologist, Texas State Department of Health; H. Grant Skinner, M.D., State Epidemiologist, Wisconsin Department of Health and Social Services; Field Investigations Branch, Office of the Associate Commissioner for Compliance, Food and Drug Administration; and 2 EIS Officers.)

**SHIGELLA SONNEI OUTBREAK — Kentucky**

Between September 1972 and January 1973, 112 cases of an intestinal illness due to *Shigella sonnei* occurred in Lexington, Kentucky, and neighboring counties. Diarrhea and fever occurred in over 90% of the patients in 87 households interviewed; 74% complained of vomiting, 54% chills, and 39% bloody diarrhea. Forty-five percent of the cases occurred in children 5 years of age and under.

Although evidence of a common source outbreak has not been substantiated, over 40% of the culture-proven cases were associated with 2 primary schools and 1 day care center. Sixty-seven percent of families interviewed gave a history suggestive of a known contact. A total of 84 additional cases were identified among 280 household contacts interviewed for an overall secondary attack rate of 29%. Age-specific secondary attack rates were highest among preschoolers (44%) with males predominating. Preschoolers receiving day care outside the home were significantly more likely to introduce illness into their families than were those who stayed at home.

Nature of housing, sewerage, and socioeconomic status of affected households generally paralleled that of the community. Number of rooms, family size, household population density, and sleeping arrangements did not correlate with illness.

Vigorous supervised handwashing in affected schools and careful follow-up of culture-proven cases were undertaken in the latter part of the epidemic; illness subsequently abated in the community at large. Results of further bacteriologic studies, including antibiotic sensitivity testing and colicin typing, are pending.

(Reported by Philip Weiler, M.D., Director, and Norma Godbey, R.N., Communicable Disease Coordinator, Lexington-Fayette County Health Department; Timothy Costitch, med-

**Editorial Note**

This is the 1st recorded outbreak of scombroid fish poisoning due to a commercially canned food product and the 9th reported scombroid outbreak since CDC began food-borne disease surveillance in 1966. The syndrome, which classically includes nausea, vomiting, facial flushing, intense headache, epigastric pain, burning sensation in the throat, dysphagia, thirst, pruritus, swelling of the lips, and urticaria, is typical of a histamine reaction. The disease is believed to be due to a substance termed saurine and other heat-stable breakdown products that are produced by the action of bacteria on the histidine of fish muscle. The diagnosis of scombroid poisoning is based on the characteristic clinical picture in conjunction with a history of recent consumption of fish of the suborder *Scombroidei* (tuna and related species). Laboratory confirmation may be obtained by analysis of the histamine content of the fish consumed. Levels of histamine in excess of 100 mg per 100 gm of fish muscle have been associated with clinical illness. Therapy includes supportive care and treatment with antihistamines and sympathomimetics as required for symptomatic relief. In rare cases, the syndrome has been associated with severe bronchospasm or shock.

ical student, University of Kentucky Medical School; Calixto Hernandez, M.D., State Epidemiologist, Kentucky State Department of Health; Gregory Filice, medical student assigned to CDC; and an EIS Officer.)

**Editorial Note**

A growing number of urban communities in the United States have reported increasing isolates of *S. sonnei* in recent years. This serotype has displaced *S. flexneri* 2 as the predominant causative agent of shigellosis, accounting for 79% of all shigella reported in 1972, compared with 45% in 1964. The same pattern has been observed in England and other Western European countries and in Japan (1,2). In addition, recent *S. sonnei* isolates have been characterized by an increasing frequency of multiple resistance to antibiotics, including ampicillin (3). The rising frequency of resistant isolates has paralleled the increasing use of ampicillin in the community, although there is no direct evidence of a cause and effect relationship. Because of the high incidence of ampicillin resistance in reported *S. sonnei* cases, ampicillin can no longer be regarded as the drug of choice for the treatment of shigellosis. Furthermore, antimicrobial therapy should be reserved for those patients whose illness is severe enough to warrant specific treatment with appropriately sensitive antibiotics.

**References**

1. Kostrzewski J, Stypulkowska-Misiurewicz H: Changes in the epidemiology of dysentery in Poland and the situation in Europe. *Arch Immunol Ther Exp* 16:429, 1968
2. Aoki Y: Serological groups of shigella in Japan and neighboring countries. *Trop Med* 10:116, 1968
3. Ross S, Controni G, Kahn N: Resistance of shigella to ampicillin and other antibiotics. *JAMA* 221:45, 1972

**BLASTOMYCOSIS — Minnesota**

In November 1972, 4 men in Bigfork, Minnesota, became ill with a disease compatible with blastomycosis. Symptoms included fever, myalgia, cough, and chest pain. Chest X-rays on the 4 patients were abnormal, and skin tests on 3 of the 4

showed a positive reaction to blastomycin. Sputum specimens obtained from all 4 patients were positive for *Blastomyces dermatitidis*. Weak complement fixation reactions to *B. dermatitidis* yeast form antigens were demonstrated in

sera from 2 of the 4 patients.

Epidemiologic investigation revealed that the only common association of the 4 men was the construction of a cabin near a lake approximately 15 miles north of Bigfork. In addition, many of their family members and friends had helped with the work or had spent leisure time there.

Seventeen family members and 5 friends were investigated. Chest X-rays were done on 16 of the 17 family members, and 8 were abnormal. Three of these 8 persons reported having symptoms similar to those of the initial 4 patients in November. All 17 family members were skin tested with blastomycin and histoplasmin; 11 showed a positive reaction to blastomycin, and 2 to histoplasmin. Sera from 2 persons with abnormal chest X-rays and from 1 with a normal film showed weak complement fixation titers to *B. dermatitidis* yeast form antigens. None of the 5 friends, who had only limited contact with the cabin, had abnormal chest X-rays or positive skin tests.

Samples of hay and rotten wood found near the cabin are being processed in an attempt to recover *B. dermatitidis*. Frozen soil and snow precluded soil sampling.

(Reported by L. G. Drucker, M.D., private physician, Big-

fork; G. A. Sarosi, M.D., Assistant Chief, Medical Service, Minneapolis Veteran's Administration Hospital; D. S. Fleming, M.D., State Epidemiologist, Minnesota State Department of Health; the Mycoses Section, Ecological Investigations Program, CDC; and an EIS Officer.)

#### Editorial Note

This is the 1st possible common source outbreak of acute pulmonary blastomycosis reported to CDC. One other documented episode of epidemic blastomycosis has appeared in the literature (1), but it was not associated with a common source.

Although isolates of *B. dermatitidis* from a natural source have been reported from 1 laboratory (2), these findings have not been confirmed, and the natural reservoir remains unknown. In this outbreak, it appears likely that the source of infection is in or near the cabin.

#### References

1. Smith JG Jr, Harris JS, Conant NF, Smith DT: An epidemic of North American Blastomycosis. JAMA 158:641-646, 1955
2. Denton JF, DiSalvo AF: Isolation of *Blastomyces dermatitidis* from natural sites at Augusta, Georgia. Amer J Trop Med Hyg 13:716-722, 1964

### PROBABLE BOTULISM — Oklahoma

On Dec. 29, 1972, a 63-year-old woman in Oklahoma City, Oklahoma, became ill with bilateral diplopia, nausea, diarrhea, and abdominal cramps. Over the next few days, she developed bilateral ptosis and difficulty in swallowing and talking and was admitted to a local hospital on January 3. She gave no history of hypertension, thyroid disease, trauma, or recent febrile illness.

On neurologic examination, the patient had dilated pupils that responded poorly to light, bilateral ptosis, bilateral 7th nerve palsy, and a poor gag reflex. The patient had mild proximal weakness of the upper extremities. Deep tendon reflexes and plantar reflexes were normal, and there were no abnormalities in the sensory examination. She was afebrile, and her systolic blood pressure was normal.

A Tensilon\* test was performed, and her ptosis subsequently appeared to improve. A tentative diagnosis of myasthenia gravis was made, and she was placed on Mestinon\*. She had little clinical improvement, however, and repeat Tensilon tests were equivocal. On the 4th hospital day, she had a respiratory arrest and became comatose. A lumbar puncture yielded cerebrospinal fluid with normal protein and glucose and no cells. A review of an electromyogram performed earlier in her hospitalization showed a 10% increase in the amplitude of the muscle action potential during rapid, repetitive nerve stimulation.

Questioning of the patient's family on the 14th day of

\*Inclusion of trade names does not imply endorsement by the Public Health Service or the U.S. Department of Health, Education, and Welfare.

her illness revealed that 24-48 hours before the onset of her symptoms, she had eaten some home-canned vegetables which "tasted terrible". She discarded the vegetables, and no other family members ate them. The implicated food was not available for examination, and bacteriologic and toxin assay studies on similar home-canned foods showed no evidence of contamination by *Clostridium botulinum*. A serum specimen obtained from the patient 14 days after the onset of symptoms was negative for circulating botulinum toxin. The patient was not treated with botulinum antitoxin.

On the 14th hospital day, the patient died. Postmortem examination showed a left-sided pneumonia and petechiae on the surface of the brain. There was no evidence of a brainstem cerebrovascular accident.

(Reported by C. G. Rule, M.D., Neurologist, Oklahoma City Clinic; Dale Peterson, M.D., Presbyterian Hospital, Oklahoma City; Mark A. Roberts, Staff Epidemiologist, and Stanley W. Ferguson, Ph.D., State Epidemiologist, Oklahoma State Department of Health; and an EIS Officer.)

#### Editorial Note

The clinical characteristics of this patient were compatible with a diagnosis of botulism, and the normal cerebrospinal fluid examination and the results of the electromyographic studies supported the diagnosis. Epidemiologic investigation implicated home-canned vegetables as the suspect food. Although serum studies were negative for botulinum toxin, these tests were performed on serum obtained on the 14th day of the patient's illness.

### INTERNATIONAL NOTES SMALLPOX SURVEILLANCE — Worldwide

Between Jan. 1 and 30, 1973, 3,257 cases of smallpox were reported to the World Health Organization. These cases were all reported by 6 countries: Bangladesh, India, Pakistan, Ethiopia, Sudan, and Nepal, the last of which recorded importations only. This is the smallest number of countries ever

to record cases of smallpox in a single month and is in sharp contrast to the situation in January 1972, when 12 countries reported 1 or more cases.

In Africa, smallpox incidence in Ethiopia continues the  
(Continued on page 76)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING FEBRUARY 24, 1973 AND FEBRUARY 26, 1972 (8th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES .....	28	4	5,630	7	23	12	11	7	115	870	1,100
NEW ENGLAND .....	-	-	554	-	2	-	-	1	3	72	68
Maine *	-	-	7	-	-	-	-	-	-	3	7
New Hampshire .....	-	-	8	-	-	-	-	-	-	7	5
Vermont .....	-	-	9	-	-	-	-	-	-	-	5
Massachusetts .....	-	-	188	-	-	-	-	-	1	24	25
Rhode Island .....	-	-	70	-	2	-	-	-	-	16	9
Connecticut .....	-	-	272	-	-	-	-	1	2	22	17
MIDDLE ATLANTIC .....	3	-	281	-	-	3	5	-	22	123	136
Upstate New York .....	1	-	1	-	-	-	1	-	4	34	33
New York City .....	-	-	98	-	-	-	1	-	5	20	30
New Jersey .....	1	-	NN	-	-	-	2	-	6	30	45
Pennsylvania .....	1	-	182	-	-	3	1	-	7	39	28
EAST NORTH CENTRAL .....	1	-	2,243	-	-	-	3	-	18	141	180
Ohio .....	-	-	379	-	-	-	1	-	1	20	33
Indiana *	-	-	490	-	-	-	-	-	2	15	8
Illinois .....	1	-	-	-	-	-	1	-	4	53	65
Michigan .....	-	-	465	-	-	-	1	-	9	49	65
Wisconsin .....	-	-	909	-	-	-	-	-	2	4	9
WEST NORTH CENTRAL .....	-	1	733	1	4	3	-	-	3	29	26
Minnesota .....	-	-	55	-	-	-	-	-	2	3	5
Iowa *	-	-	485	-	-	1	-	-	-	5	9
Missouri .....	-	-	66	-	-	-	-	-	-	15	4
North Dakota .....	-	-	73	-	-	-	-	-	-	-	-
South Dakota .....	-	-	5	1	4	-	-	-	-	2	-
Nebraska .....	-	1	29	-	-	-	-	-	1	-	1
Kansas .....	-	-	20	-	-	2	-	-	-	4	7
SOUTH ATLANTIC .....	7	2	468	-	-	3	2	-	18	183	173
Delaware .....	-	-	18	-	-	-	-	-	-	1	3
Maryland .....	-	-	23	-	-	-	-	-	1	23	24
District of Columbia .....	-	-	-	-	-	-	-	-	-	-	9
Virginia .....	1	1	44	-	-	-	-	-	5	24	16
West Virginia .....	-	-	364	-	-	-	-	-	1	10	10
North Carolina .....	1	-	NN	-	-	3	2	-	4	44	32
South Carolina .....	-	-	19	-	-	-	-	-	-	6	10
Georgia .....	-	1	-	-	-	-	-	-	-	15	20
Florida .....	5	-	-	-	-	-	-	-	7	60	49
EAST SOUTH CENTRAL .....	12	-	244	-	-	-	1	2	7	63	84
Kentucky .....	-	-	143	-	-	-	-	-	1	21	45
Tennessee .....	2	-	NN	-	-	-	1	-	-	25	27
Alabama .....	10	-	91	-	-	-	-	2	5	14	8
Mississippi .....	-	-	10	-	-	-	-	-	1	3	4
WEST SOUTH CENTRAL .....	1	-	626	-	2	-	-	-	14	97	118
Arkansas *	-	-	14	-	-	-	-	-	-	2	4
Louisiana .....	-	-	NN	-	-	-	-	-	-	15	17
Oklahoma .....	-	-	80	-	-	-	-	-	2	12	24
Texas .....	1	-	532	-	2	-	-	-	12	68	73
MOUNTAIN .....	-	-	120	-	-	-	-	1	1	31	75
Montana .....	-	-	25	-	-	-	-	-	-	8	3
Idaho .....	-	-	-	-	-	-	-	-	-	2	3
Wyoming .....	-	-	46	-	-	-	-	-	-	-	1
Colorado *	-	-	30	-	-	-	-	-	1	3	23
New Mexico .....	-	-	14	-	-	-	-	-	-	13	10
Arizona *	-	-	-	-	-	-	-	-	-	-	30
Utah .....	-	-	5	-	-	-	-	-	-	2	5
Nevada .....	-	-	-	-	-	-	-	1	-	3	-
PACIFIC .....	4	1	361	6	15	3	-	3	29	131	240
Washington .....	-	-	294	5	13	-	-	-	-	13	17
Oregon .....	-	-	-	1	1	-	-	-	-	21	34
California .....	3	1	-	-	1	3	-	3	23	90	178
Alaska *	1	-	54	-	-	-	-	-	5	2	6
Hawaii .....	-	-	13	-	-	-	-	-	1	5	5
Guam *	-	-	-	-	-	-	-	-	-	-	4
Puerto Rico .....	-	-	14	-	-	-	-	-	-	3	19
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: Guam 1

Chickenpox: Me. 8, Ark. 1, Ariz. 2, Guam 8

Encephalitis, primary: Colo. 1

Hepatitis B: Iowa 1, (1972) Alaska 1

Hepatitis A: Me. 1, Ind. delete 1, Iowa delete 2, Ark. 11, Ariz. 5, Guam 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING FEBRUARY 24, 1973 AND FEBRUARY 26, 1972 (8th WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES . . . . .	3	27	618	4,750	5,208	40	240	297	1,886	14,167	639	3,504
NEW ENGLAND . . . . .	—	2	234	1,962	322	2	13	11	48	535	56	338
Maine . . . . .	—	—	—	8	59	—	—	1	2	17	—	10
New Hampshire . . . . .	—	—	33	319	20	—	1	—	6	33	—	6
Vermont . . . . .	—	1	—	26	54	1	1	—	1	78	—	5
Massachusetts . . . . .	—	—	139	998	26	—	5	5	19	216	35	186
Rhode Island . . . . .	—	—	21	169	51	—	—	5	8	59	1	7
Connecticut . . . . .	—	1	41	442	112	1	6	—	12	132	20	124
MIDDLE ATLANTIC . . . . .	1	5	32	351	363	4	31	31	215	1,296	35	343
Upstate New York . . . . .	—	2	4	60	22	1	8	9	NN	NN	1	38
New York City . . . . .	1	1	26	222	60	1	7	7	126	791	8	35
New Jersey . . . . .	—	1	—	46	266	1	7	9	61	305	14	238
Pennsylvania . . . . .	—	1	2	23	15	1	9	6	28	200	12	32
EAST NORTH CENTRAL . . . . .	1	3	197	1,323	2,133	3	21	36	532	4,082	170	831
Ohio . . . . .	—	—	14	75	61	2	14	14	88	555	16	97
Indiana . . . . .	—	—	33	129	510	—	1	6	88	378	39	184
Illinois . . . . .	1	2	62	458	640	—	1	6	65	743	28	114
Michigan . . . . .	—	1	59	415	328	1	5	9	96	1,104	40	177
Wisconsin . . . . .	—	—	29	246	594	—	—	1	195	1,302	47	259
WEST NORTH CENTRAL . . . . .	—	—	20	125	224	5	21	24	163	1,232	50	366
Minnesota . . . . .	—	—	3	10	5	—	—	3	7	34	16	35
Iowa . . . . .	—	—	16	97	126	—	3	—	121	928	10	76
Missouri . . . . .	—	—	1	4	66	3	11	4	11	124	1	166
North Dakota . . . . .	—	—	—	6	20	—	—	—	4	24	3	24
South Dakota . . . . .	—	—	—	—	2	—	2	1	—	3	—	2
Nebraska . . . . .	—	—	—	1	5	1	1	5	2	31	16	42
Kansas . . . . .	—	—	—	7	—	1	4	11	18	88	4	21
SOUTH ATLANTIC . . . . .	1	5	20	142	507	6	38	62	286	1,609	71	285
Delaware . . . . .	—	—	—	1	2	—	—	1	14	94	1	2
Maryland . . . . .	—	—	—	—	4	1	10	7	27	217	4	6
District of Columbia . . . . .	—	—	—	1	—	—	1	2	1	6	—	1
Virginia *. . . . .	1	4	1	8	9	1	4	13	21	147	8	13
West Virginia . . . . .	—	—	3	30	23	—	—	5	82	583	7	49
North Carolina . . . . .	—	1	—	4	16	—	9	14	NN	NN	2	6
South Carolina . . . . .	—	—	—	14	71	—	2	7	14	66	—	9
Georgia . . . . .	—	—	—	7	20	2	8	—	—	7	—	3
Florida . . . . .	—	—	16	77	362	2	4	13	127	489	49	196
EAST SOUTH CENTRAL . . . . .	—	1	10	107	243	2	15	25	102	1,114	30	255
Kentucky . . . . .	—	—	4	24	111	—	4	6	48	291	9	129
Tennessee . . . . .	—	—	4	60	28	1	7	11	30	348	21	110
Alabama . . . . .	—	1	—	—	66	—	2	6	20	150	—	8
Mississippi . . . . .	—	—	2	23	38	1	2	2	4	325	—	8
WEST SOUTH CENTRAL . . . . .	—	5	24	208	295	6	36	39	185	1,053	77	290
Arkansas *. . . . .	—	—	—	4	6	—	2	6	3	32	—	8
Louisiana . . . . .	—	1	—	13	11	1	4	13	4	12	—	—
Oklahoma . . . . .	—	—	—	4	2	—	2	1	21	63	2	22
Texas . . . . .	—	4	24	187	276	5	28	19	157	946	75	260
MOUNTAIN . . . . .	—	2	34	107	428	—	8	5	126	800	28	174
Montana . . . . .	—	1	—	1	9	—	1	—	6	68	—	8
Idaho . . . . .	—	—	2	15	3	—	—	2	9	40	—	4
Wyoming . . . . .	—	—	1	2	—	—	—	1	65	231	—	—
Colorado . . . . .	—	—	5	22	203	—	2	—	9	64	21	86
New Mexico . . . . .	—	1	26	59	26	—	1	1	37	263	6	22
Arizona *. . . . .	—	—	—	8	95	—	1	—	—	101	—	7
Utah . . . . .	—	—	—	—	92	—	1	1	—	31	1	46
Nevada . . . . .	—	—	—	—	—	—	2	—	—	2	—	1
PACIFIC . . . . .	—	4	47	425	693	12	57	64	229	2,446	122	622
Washington . . . . .	—	—	2	200	195	—	3	7	31	258	9	80
Oregon . . . . .	—	—	38	108	9	—	2	4	72	564	7	108
California . . . . .	—	4	7	113	461	12	51	52	110	1,417	104	428
Alaska . . . . .	—	—	—	—	5	—	1	—	11	172	—	—
Hawaii . . . . .	—	—	—	4	23	—	—	1	5	35	2	6
Guam . . . . .	—	—	—	2	—	—	—	2	—	1	—	1
Puerto Rico . . . . .	—	—	27	308	60	1	1	—	13	126	4	11
Virgin Islands . . . . .	—	—	—	—	—	—	—	2	—	2	—	—

\*Delayed reports: Measles: Va. delete 4  
Mumps: Ark. 1, Ariz. 3  
Rubella: Va. delete 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING FEBRUARY 24, 1973 AND FEBRUARY 26, 1972 (8th WEEK) – Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES . . . . .	9	620	4,276	14	1	25	1	4	14,776	497	56	448
NEW ENGLAND . . . . .	—	34	148	—	—	1	—	—	311	16	7	26
Maine . . . . .	—	1	10	—	—	—	—	—	20	1	4	23
New Hampshire . . . . .	—	1	2	—	—	—	—	—	17	—	2	2
Vermont . . . . .	—	—	3	—	—	—	—	—	2	2	—	—
Massachusetts . . . . .	—	25	91	—	—	1	—	—	129	6	1	1
Rhode Island . . . . .	—	1	9	—	—	—	—	—	38	—	—	—
Connecticut . . . . .	—	6	33	—	—	—	—	—	105	7	—	—
MIDDLE ATLANTIC . . . . .	3	158	885	—	—	4	—	1	2,105	91	—	4
Upstate New York . . . . .	—	36	203	—	—	—	—	—	878	6	—	1
New York City . . . . .	1	50	294	—	—	4	—	—	572	48	—	—
New Jersey . . . . .	2	34	187	—	—	—	—	—	272	13	—	—
Pennsylvania . . . . .	—	38	201	—	—	—	—	1	383	24	—	3
EAST NORTH CENTRAL . . . . .	1	123	674	1	—	2	—	—	1,809	37	4	37
Ohio * . . . . .	—	39	266	1	—	1	—	—	616	14	—	9
Indiana . . . . .	—	29	101	—	—	—	—	—	236	4	2	6
Illinois . . . . .	—	41	183	—	—	—	—	—	225	4	2	10
Michigan . . . . .	—	14	102	—	—	1	—	—	489	14	—	—
Wisconsin . . . . .	1	—	22	—	—	—	—	—	243	1	—	12
WEST NORTH CENTRAL . . . . .	2	16	145	2	—	—	—	1	960	5	13	131
Minnesota . . . . .	—	1	11	—	—	—	—	—	219	1	6	48
Iowa . . . . .	—	3	24	—	—	—	—	—	82	2	4	43
Missouri . . . . .	2	4	61	2	—	—	—	1	300	1	1	13
North Dakota . . . . .	—	1	5	—	—	—	—	—	9	—	2	23
South Dakota . . . . .	—	—	11	—	—	—	—	—	36	—	—	3
Nebraska . . . . .	—	—	11	—	—	—	—	—	95	—	—	—
Kansas . . . . .	—	7	22	—	—	—	—	—	219	1	—	1
SOUTH ATLANTIC . . . . .	2	112	872	3	—	5	—	—	3,519	171	6	46
Delaware . . . . .	—	—	9	—	—	—	—	—	39	2	—	—
Maryland . . . . .	—	12	96	—	—	—	—	—	320	12	—	2
District of Columbia . . . . .	—	8	47	—	—	—	—	—	265	10	—	—
Virginia * . . . . .	—	7	109	1	—	—	—	—	279	44	2	18
West Virginia . . . . .	—	11	43	—	—	—	—	—	72	—	1	8
North Carolina * . . . . .	—	18	150	1	—	1	—	—	426	16	—	—
South Carolina . . . . .	—	—	92	—	—	1	—	—	269	39	—	—
Georgia . . . . .	—	24	138	1	—	1	—	—	804	26	2	11
Florida . . . . .	2	32	188	—	—	2	—	—	1,045	22	1	7
EAST SOUTH CENTRAL . . . . .	1	35	347	4	—	1	1	2	1,418	30	18	105
Kentucky * . . . . .	—	6	78	1	—	—	—	—	146	10	8	41
Tennessee . . . . .	—	13	96	3	—	—	1	1	410	6	7	43
Alabama . . . . .	1	7	116	—	—	1	—	1	517	1	3	21
Mississippi * . . . . .	—	9	57	—	—	—	—	—	345	13	—	—
WEST SOUTH CENTRAL . . . . .	—	46	402	4	—	1	—	—	2,208	52	7	60
Arkansas . . . . .	—	7	51	1	—	—	—	—	131	2	1	16
Louisiana * . . . . .	—	6	101	—	—	—	—	—	561	11	—	3
Oklahoma . . . . .	—	5	34	2	—	1	—	—	221	5	3	14
Texas . . . . .	—	28	216	1	—	—	—	—	1,295	34	3	27
MOUNTAIN . . . . .	—	3	126	—	—	1	—	—	446	23	—	4
Montana . . . . .	—	1	4	—	—	—	—	—	26	—	—	—
Idaho . . . . .	—	—	7	—	—	—	—	—	37	—	—	—
Wyoming . . . . .	—	1	6	—	—	—	—	—	10	1	—	—
Colorado . . . . .	—	—	15	—	—	—	—	—	112	7	—	—
New Mexico . . . . .	—	1	31	—	—	1	—	—	28	4	—	—
Arizona . . . . .	—	—	54	—	—	—	—	—	153	6	—	4
Utah . . . . .	—	—	4	—	—	—	—	—	42	1	—	—
Nevada * . . . . .	—	—	5	—	—	—	—	—	38	4	—	—
PACIFIC . . . . .	—	93	677	—	1	10	—	—	2,000	72	1	35
Washington . . . . .	—	9	54	—	—	—	—	—	166	1	—	—
Oregon . . . . .	—	6	30	—	—	1	—	—	137	1	—	—
California . . . . .	—	73	547	—	1	9	—	—	1,628	69	1	33
Alaska . . . . .	—	—	8	—	—	—	—	—	41	1	—	2
Hawaii . . . . .	—	5	38	—	—	—	—	—	28	—	—	—
Guam * . . . . .	—	—	3	—	—	—	—	—	—	—	—	—
Puerto Rico . . . . .	3	15	88	—	—	—	—	—	51	16	1	6
Virgin Islands . . . . .	—	—	—	—	—	—	—	—	8	1	—	—

\*Delayed reports: TB: Ohio delete 1, (1972) N.C. delete 4, Ky. delete 2  
RMSF: (1972) Va. 1  
Gonorrhea: La. delete 1, Nev. 73, Guam 4

Syphilis: Miss. 1  
Rabies: Ark. 3

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING FEBRUARY 24, 1973

Week No.

8

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	733	447	21	48	SOUTH ATLANTIC	1,356	761	48	87
Boston, Mass.	211	110	6	21	Atlanta, Ga.	160	73	8	15
Bridgeport, Conn.	51	27	1	4	Baltimore, Md.	239	130	2	10
Cambridge, Mass.	18	15	1	1	Charlotte, N. C.	64	33	4	2
Fall River, Mass.	34	24	—	2	Jacksonville, Fla.	95	64	3	1
Hartford, Conn.	74	38	3	1	Miami, Fla.	140	79	5	6
Lowell, Mass.	18	14	—	1	Norfolk, Va.	81	39	3	6
Lynn, Mass.	14	13	1	—	Richmond, Va.	90	45	—	8
New Bedford, Mass.	32	24	1	3	Savannah, Ga.	50	22	—	6
New Haven, Conn.	66	40	2	2	St. Petersburg, Fla.	153	129	3	8
Providence, R. I.	55	32	1	9	Tampa, Fla.	103	68	4	14
Somerville, Mass.	10	6	—	—	Washington, D. C.	152	63	16	8
Springfield, Mass.	50	34	2	2	Wilmington, Del.	29	16	—	3
Waterbury, Conn.	32	24	1	—	EAST SOUTH CENTRAL	778	439	36	51
Worcester, Mass.	68	46	2	2	Birmingham, Ala.	130	70	4	2
MIDDLE ATLANTIC	3,325	1,994	100	160	Chattanooga, Tenn.	53	23	7	13
Albany, N. Y.	63	38	2	6	Knoxville, Tenn.	44	31	1	1
Allentown, Pa.	37	22	—	3	Louisville, Ky.	123	74	8	7
Buffalo, N. Y.	155	93	4	11	Memphis, Tenn.	172	98	4	7
Camden, N. J.	41	25	2	4	Mobile, Ala.	84	50	3	4
Elizabeth, N. J.	35	20	—	3	Montgomery, Ala.	50	30	1	5
Erie, Pa.	40	23	—	7	Nashville, Tenn.	122	63	8	12
Jersey City, N. J.	56	30	3	3	WEST SOUTH CENTRAL	1,527	843	69	76
Newark, N. J.	91	42	1	3	Austin, Tex.	43	24	—	2
New York City, N. Y. †	1,491	902	48	54	Baton Rouge, La.	51	33	1	5
Paterson, N. J.	40	23	2	5	Corpus Christi, Tex.	69	40	6	3
Philadelphia, Pa.	606	371	14	10	Dallas, Tex.	203	103	10	2
Pittsburgh, Pa.	215	112	10	19	El Paso, Tex.	57	37	7	8
Reading, Pa.	37	31	1	1	Fort Worth, Tex.	98	64	2	4
Rochester, N. Y.	133	91	2	19	Houston, Tex.	315	158	9	12
Schenectady, N. Y.	21	15	—	—	Little Rock, Ark.	59	28	—	1
Scranton, Pa.	57	37	—	3	New Orleans, La.	181	85	13	2
Syracuse, N. Y.	104	56	7	3	Oklahoma City, Okla. *	107	63	5	4
Trenton, N. J.	34	15	1	2	San Antonio, Tex.	158	90	8	6
Utica, N. Y.	37	28	1	3	Shreveport, La.	94	54	3	7
Yonkers, N. Y.	32	20	2	1	Tulsa, Okla.	92	64	5	20
EAST NORTH CENTRAL	2,618	1,562	112	103	MOUNTAIN	587	343	27	29
Akron, Ohio	46	28	2	—	Albuquerque, N. Mex.	50	25	1	4
Canton, Ohio	36	22	1	5	Colorado Springs, Colo.	32	18	1	4
Chicago, Ill.	690	391	36	15	Denver, Colo.	146	95	4	7
Cincinnati, Ohio	121	80	3	13	Las Vegas, Nev.	16	4	1	1
Cleveland, Ohio	219	120	6	8	Ogden, Utah	23	12	3	1
Columbus, Ohio	135	81	6	6	Phoenix, Ariz.	150	89	7	2
Dayton, Ohio	99	52	4	3	Pueblo, Colo.	23	17	1	4
Detroit, Mich.	397	233	23	11	Salt Lake City, Utah	81	49	6	3
Evansville, Ind.	53	36	1	2	Tucson, Ariz.	66	34	3	3
Fort Wayne, Ind.	49	37	1	4	PACIFIC	1,754	1,076	49	89
Gary, Ind.	39	17	3	3	Berkeley, Calif.	25	17	—	1
Grand Rapids, Mich.	57	41	2	6	Fresno, Calif.	47	30	3	4
Indianapolis, Ind.	161	100	4	4	Glendale, Calif.	24	20	—	2
Madison, Wis.	31	15	4	3	Honolulu, Hawaii	65	36	2	—
Milwaukee, Wis.	142	102	1	5	Long Beach, Calif.	106	67	3	7
Peoria, Ill.	59	35	7	—	Los Angeles, Calif.	571	321	23	23
Rockford, Ill.	42	23	3	2	Oakland, Calif.	82	53	2	4
South Bend, Ind.	40	27	1	6	Pasadena, Calif.	31	22	—	1
Toledo, Ohio	129	76	3	4	Portland, Oreg.	150	98	2	9
Youngstown, Ohio	73	46	1	3	Sacramento, Calif.	59	32	3	3
WEST NORTH CENTRAL	890	552	40	56	San Diego, Calif.	107	65	2	1
Des Moines, Iowa	56	30	6	2	San Francisco, Calif.	190	121	2	8
Duluth, Minn.	23	19	2	5	San Jose, Calif.	50	28	2	2
Kansas City, Kans.	38	17	3	—	Seattle, Wash.	132	84	1	11
Kansas City, Mo.	131	83	6	4	Spokane, Wash.	69	50	2	7
Lincoln, Nebr.	27	14	1	5	Tacoma, Wash.	46	32	2	6
Minneapolis, Minn.	144	89	10	5	Total	13,568	8,017	502	699
Omaha, Nebr.	79	50	2	1	Expected Number	13,537	7,947	548	589
St. Louis, Mo.	197	113	3	6	Cumulative Total (includes reported corrections for previous weeks)	116,330	70,233	4,059	6,679
St. Paul, Minn.	91	68	3	7					
Wichita, Kans.	104	69	4	21					

†Delayed report for week ended Feb. 17, 1973

\*Estimate based on average percent of divisional total

**SMALLPOX — Continued**

steady decline begun in March 1972, and the total cases for January 1973 is 85% less than in January 1972. Only 1 case has been detected in Sudan for more than 4 weeks, and none have been reported in Botswana since late October. Except for well-documented importations from these countries, no cases have been detected elsewhere in Africa for the past 17 months.

In Asia, the smallpox situation is equally encouraging in Afghanistan where no cases have been detected for more than 8 weeks, in Indonesia where the last known cases occurred more than a year ago, and in Nepal where all cases since June have been traced directly or indirectly to importations from India.

In India, Bangladesh, and Pakistan, however, there is cause for concern. In December, all 3 countries recorded a higher incidence of smallpox than in any December period

since 1967. While improved surveillance and more complete reporting of cases undoubtedly account in part for this, it is also clear that extensive outbreaks are in progress in India (especially in the States of Uttar Pradesh, Madhya Pradesh, West Bengal, Jammu and Kashmir, and Bihar), in Bangladesh (primarily in the central and southwestern districts), and in Pakistan (Sind Province and adjoining areas). As December is only the beginning of the smallpox season, a continuing increase in incidence through April may be expected in these countries unless far more vigorous efforts are made to contain the spread of infection. Travelers to these countries should assure before departure that they are successfully vaccinated with fully potent freeze-dried vaccine.

(Reported by the World Health Organization: Weekly Epidemiological Record, Vol. 48, No. 5, Feb. 2, 1973.)

**QUARANTINE MEASURES**

The following changes should be made in the "Supplement — United States Designated Yellow Fever Vaccination Centers," MMWR, Vol. 21, No. 20:

**HAWAII**

Hilo University of Hawaii  
(Change name to Peace Corps Project  
Change address to: 144 Haili St. 96720  
Change telephone to 808, 935-1056)

**NEW YORK**

Albany State Dept. of Health 12208  
(Delete: Division of Laboratories and  
Research.  
Insert: Dept. of Health Bldg.)

**OHIO**

Akron Health Dept., John D. Morley Health  
Center 44308  
(Clinic hours: Delete Fri., 9 a.m.  
Insert: Thurs., 9 a.m.)

**OKLAHOMA**

Bartlesville Phillips Petroleum Co.  
(Change address to Medical Dept.  
Change code to 74004)

**Enid**

Garfield County Health Dept. 73701  
(Change clinic hours to: 1st Mon. each  
month, 2 p.m.)

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Director, Center for Disease Control  
Director, Epidemiology Program, CDC  
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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to: Center for Disease Control  
Attn: Editor  
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PUBLIC HEALTH SERVICE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION  
CENTER FOR DISEASE CONTROL  
ATLANTA, GEORGIA 30333

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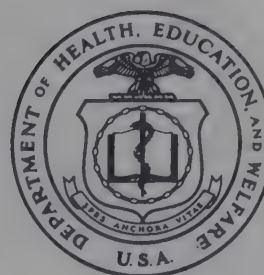
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# Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION  
DATE OF RELEASE: MARCH 9, 1973 - ATLANTA, GEORGIA 30333

## EPIDEMIOLOGIC NOTES AND REPORTS TYPHOID FEVER - Florida

On Feb. 3, 1973, the Dade County Department of Public Health was notified of a case of suspect typhoid fever in a 10-year-old girl from the South Dade Migrant Farm Labor Camp, Homestead, Florida. A 2nd case from the camp, with culture-proven *Salmonella typhi* infection, was reported on February 26 in a woman hospitalized for obstetrical delivery. No common source for these 2 cases or contact with earlier cases or known carriers were uncovered by the initial epidemiologic investigation. On February 28, more suspect cases among residents of the camp were reported. A survey of 361 of the camp's 1,900 inhabitants performed on February 28 elicited a history of recent febrile or enteric illness in 137 (38%) of those surveyed. A complete survey of the camp was conducted on March 2. All inhabitants describing a febrile or enteric illness within the previous 3 weeks were referred to

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a clinic at the camp for physical examination, rectal swab culturing, and serology. Those suspected on clinical grounds of having typhoid fever were hospitalized.

By March 7, 150 suspect cases had been hospitalized; the diagnosis of typhoid fever has been confirmed by culture in 63 of these and by 4-fold or greater rises in titers to salmonella groups D and O in 4 others. Typical symptoms included fever, headache, abdominal pain, and lassitude. Most

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	9th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 9 WEEKS		
	March 3, 1973	March 4, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	27	22	30	319	320	268
Brucellosis	—	1	2	16	16	16
Chickenpox	6,608	4,199	—	44,476	31,137	—
Diphtheria	—	3	3	22	21	28
Encephalitis, primary:						
Arthropod-borne and unspecified	26	13	19	145	141	177
Encephalitis, post-infectious	3	4	5	34	40	54
Hepatitis, serum (Hepatitis B)	140	235	112	1,202	1,698	1,087
Hepatitis, infectious (Hepatitis A)	962	1,125	1,125	8,525	9,845	9,829
Malaria	4	18	51	31	299	417
Measles (rubeola)	791	820	820	5,554	6,028	6,028
Meningococcal infections, total	35	33	76	276	330	621
Civilian	33	33	57	265	321	576
Military	2	—	9	11	9	46
Mumps	1,958	1,978	2,704	16,143	18,691	22,613
Rubella (German measles)	953	622	1,205	4,490	4,837	6,894
Tetanus	1	2	2	10	11	11
Tuberculosis, new active	660	669	—	4,881	4,967	—
Tularemia	—	2	1	14	19	19
Typhoid fever	12	8	4	38	45	41
Typhus, tick-borne (Rky. Mt. spotted fever)	1	—	—	5	9	3
Venereal Diseases:						
Gonorrhea	14,362	13,226	—	128,694	114,269	—
Syphilis, primary and secondary	554	439	—	4,694	3,815	—
Rabies in animals	56	93	86	506	622	622

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	—	Poliomyelitis, total:	—
Botulism:	—	Paralytic:	—
Congenital rubella syndrome: Hawaii - 1	6	Psittacosis:	3
Leprosy: Calif. - 3, Hawaii - 6, Iowa - 1, Ky. - 1	21	Rabies in man:	—
Leptospirosis:	6	Trichinosis: Mass. - 1	10
Plague:	—	Typhus, murine: Tex. - 1	2

**TYPHOID FEVER — Continued**

cases occurred within a 2-week period centering about February 21, suggesting a common source outbreak (Figure 1). The majority of cases have been in the 5- to 19-year age group. All but 7 cases (2 with positive cultures) are in residents of the camp. There have been no deaths.

Water consumption histories have been obtained from 31 cases and from 244 persons denying clinical illness. These data suggest a correlation between illness and the consumption of increasing amounts of water (Table 1). The camp's water comes from 2 wells which supply only this camp. In February, malfunctioning of the chlorinator occurred. Furthermore, residents of the camp reported that the water supply was temporarily turned off several times in the past month. Bacteriologic testing of water samples taken on March 2 has revealed heavy fecal coliform contamination on multiple samples. *S. typhi* has not been isolated from the water. Dye studies have revealed direct contamination of the well by a drain next to the pumphouse and from the ground surrounding the well housing.

Control measures included hospitalization of cases, heavy chlorination of the camp's water supply, exclusion of camp children from school, and a voluntary quarantine on emigration from the camp. On March 5, another camp survey was initiated to repeat the culturing of family contacts of known cases and of others reporting recent illness.

(Reported by Milton S. Saslaw, M.D., Director, Joel L. Nitzkin, M.D., Director, Office of Consumer Protection, Diane Eisman, M.D., Acting Head, Disease Control Section, Kenneth

Table 1  
Typhoid Fever Cases, By Amount of Water Consumed  
Homestead, Florida — February 1973

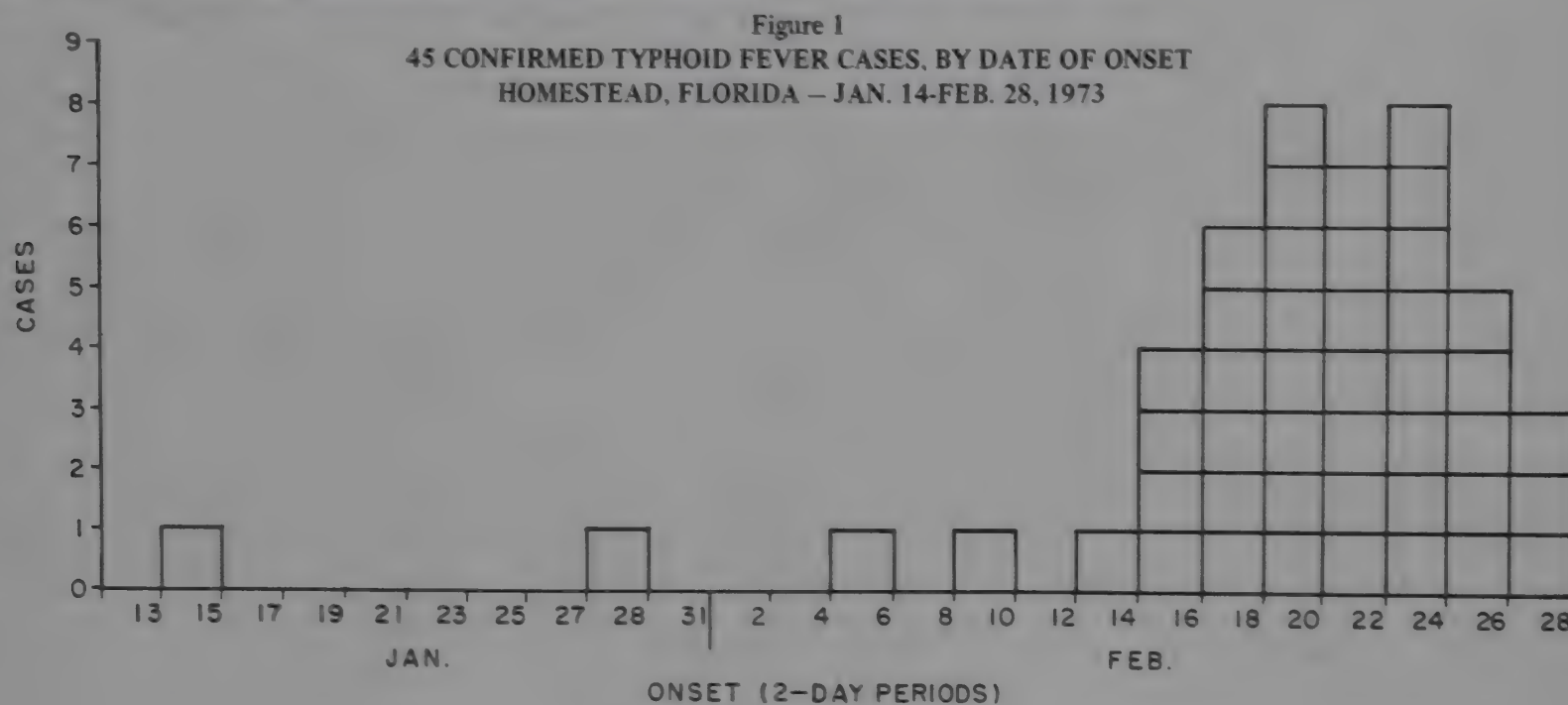
Glasses of Water Consumed Per Day	Ill	Well	Total
0	0	7	7
1-4	12	161	173
> 4	19	76	95
Total	31	244	275

$\chi^2 = 11.4$ , 2 d.f.

$p = < 0.005$

Pfeiffer, Assistant Head, Engineering Section, Dade County Department of Public Health; Ralph D. Hogan, M.D., State Epidemiologist, Florida Division of Health; and 2 EIS Officers.)  
Editorial Note

This is the largest reported outbreak of typhoid fever in the United States in the past 20 years. County, state, and federal health officials are presently examining the migratory patterns of the families of this camp to establish where persons who might be incubating the illness have emigrated. Although no strict quarantine measures are in effect, all evidence indicates minimal movement of workers and their families from the camp at this time. All state and territorial health officers have been notified of the outbreak by CDC and informed that as information about migration of workers during the epidemic period becomes available, it will be transmitted to them directly.

**FOLLOW-UP ON SCOMBROID FISH POISONING IN CANNED TUNA FISH — United States**

On Feb. 24, 1973, CDC reported 229 clinical cases of scombroid fish poisoning from 8 states, associated with the consumption of Star-Kist tuna from lots D 417 and D 419. These lots were shown to have high levels of histamine. The syndrome was characterized by oral burning and blistering, headache, urticaria, abdominal cramps, diarrhea, and cutaneous flushing. No deaths were reported.

On March 7, a telephone survey of state epidemiologists was undertaken as a follow-up of this initial report. Minnesota, which initially reported 166 cases, updated their total to 181. South Dakota, with 50 cases last week had 1 additional case this week. Oregon, which reported 50 suspect cases last week,

reported no new cases and confirmed only 13 of the original 50. Wisconsin, which had 1 suspect case last week, reported a total of 4 cases for the 2-week period. Georgia reported 1 suspect case this week. In all, 254 cases have been reported, of which 234 occurred in the 1st week of the outbreak.

Fifteen additional patients were reported who gave a history of eating tuna fish belonging to 1 of 4 different lots. Of these, 3 lots have been examined by the Food and Drug Administration and were negative for histamine.

(Reported by the Bacterial Diseases Branch, Epidemiology Program, CDC.)

SURVEILLANCE SUMMARY  
MEASLES – United States, 1st 8 Weeks, 1973

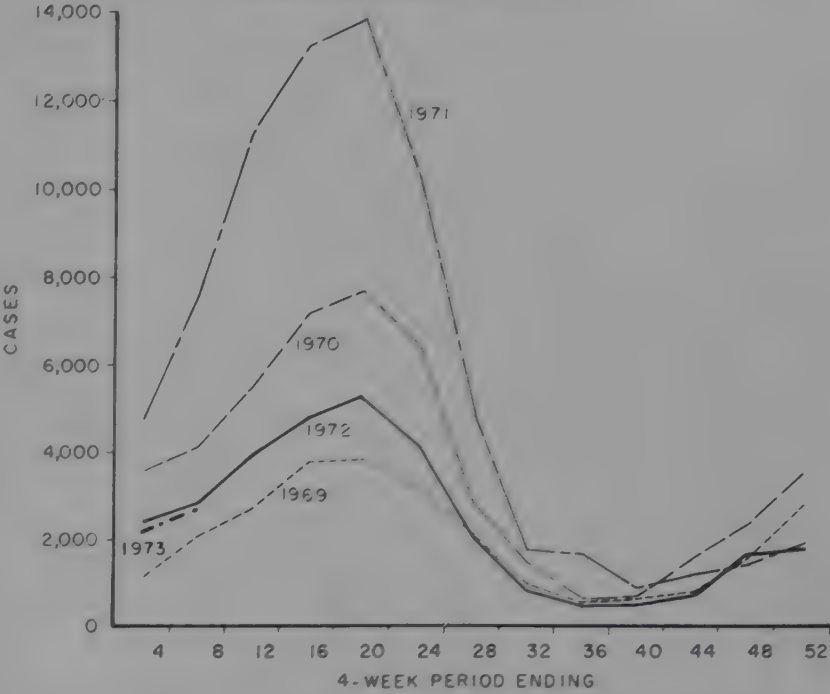
In the 1st 8 weeks of 1973, 4,705 cases of measles were reported, representing a decline of 9% over the 5,208 cases that were reported for the comparable period in 1972. In contrast, a 57% reduction in reported cases was noted in the 1st 8 weeks of 1972 compared with the same period in 1971 (Figure 2).

Seventeen states, the District of Columbia, and Puerto Rico experienced increases in reported cases compared with last year's total for the same period. Massachusetts, New Hampshire, Rhode Island, and Idaho had the largest percentage increases.

The New England region, with 6.0% of the U.S. population under 18 years of age, accounted for 41% of the total cases reported this year and had the largest percentage increase over the comparable period in 1972. The South Atlantic and East South Central regions had the largest percentage decreases in reported cases.

(Reported by the Field Services Branch, Epidemiology Program, and the Immunization Branch, State and Community Services Division, CDC.)

Figure 2  
REPORTED CASES OF MEASLES, BY 4-WEEK PERIODS  
UNITED STATES – 1969-73



EPIDEMIOLOGIC NOTES AND REPORTS  
SHIGELLA SONNEI OUTBREAK – Texas

On Feb. 13, 1973, a sharp rise in absenteeism was noted in an elementary school in Austin, Texas, and by February 15, 116 of 232 children and 6 of 30 adults who worked at the school were absent with a febrile intestinal illness (Figure 3). In addition, 15 of 25 preschoolers who attended a day care center in the school building were also ill. Stool specimens from 38 symptomatic individuals were cultured, and 36 yielded *Shigella sonnei*.

Investigation revealed that only those persons who ate lunch at school on February 12 were affected; furthermore,

food histories obtained from 30 adults at the school showed that of those who did eat at school, only those who ate tuna fish salad became ill (Table 2). None of the implicated tuna fish salad was available for examination, however, and tests on several ingredients such as mayonnaise, lemons, and lettuce were negative.

Stool specimens from the 4 food handlers at the school were subsequently examined; 1 from the worker who prepared the tuna fish salad was positive for *S. sonnei*. This worker denied having diarrhea but did report having an "upset stomach" without fever, vomiting, or diarrhea the previous week. She also reported that her 2 sons, ages 7 and 13, had become ill the week before with diarrhea and fever. Stool specimens from both her sons were positive for *S. sonnei*.

It was recommended that all food handlers and preschoolers with positive cultures be kept home until they had 3 negative stool cultures. Elementary school students were allowed to return to school, but careful handwashing and close follow-up were emphasized.

(Reported by J. Yoas, R.N., supervising nurse, E. Gentry, M.D., Director, Communicable Diseases, and J. Sessums, M.D., Director, Austin-Travis Health Department; M. S. Dickerson, M.D., State Epidemiologist, Texas State Department of Health; and 2 EIS Officers.)

Editorial Note

In 1971, an estimated 3,100 outbreaks of foodborne illness occurred in the United States (1); 2.2% of the out-  
(Continued on page 84)

Figure 3

PERCENT OF STUDENTS ABSENT  
AUSTIN, TEXAS ELEMENTARY SCHOOL  
FEBRUARY 1973

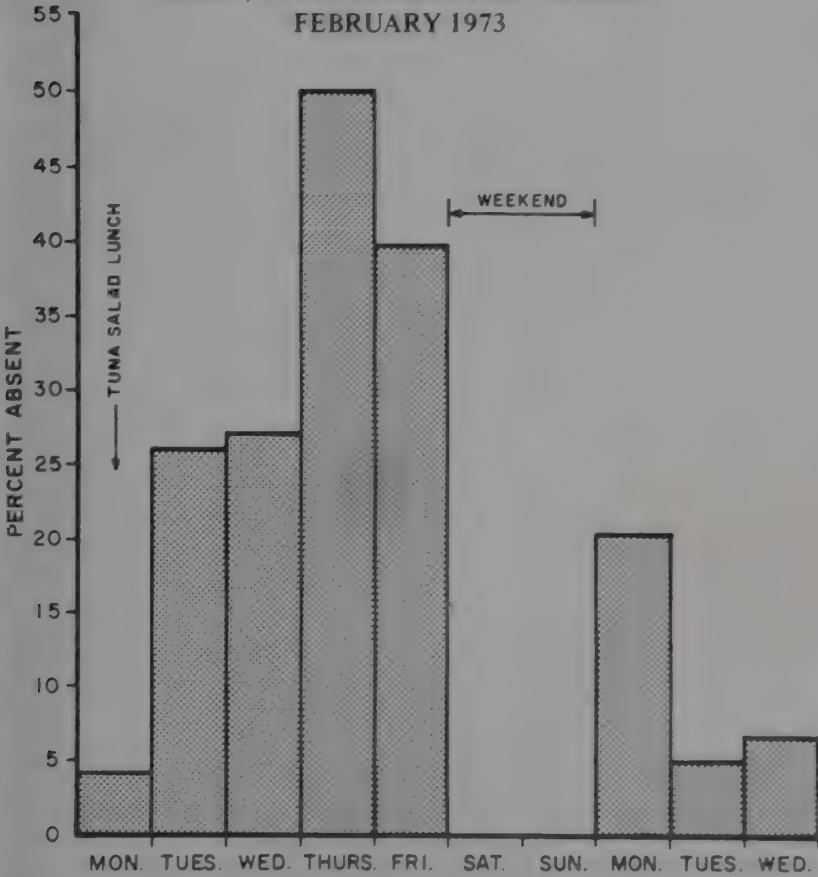


Table 2

Diarrheal Illness Among 30 Adults, by History of Eating Tuna Fish Salad  
Austin, Texas Elementary School – Feb. 12, 1973

	Ill	Not Ill
Ate Tuna Fish Salad	6	9
Did Not Eat Tuna Fish Salad	0	15

p = .008

## Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MARCH 3, 1973 AND MARCH 4, 1972 (9th WEEK) - Continued

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES .....	27	-	6,608	-	22	26	13	3	140	962	1,125
NEW ENGLAND .....	1	-	410	-	2	2	1	1	5	47	69
Maine *	-	-	24	-	-	-	-	-	-	2	11
New Hampshire *	-	-	24	-	-	-	-	-	1	6	2
Vermont .....	-	-	34	-	-	-	-	-	-	10	4
Massachusetts .....	1	-	202	-	-	1	-	-	1	16	31
Rhode Island .....	-	-	64	-	2	-	-	-	1	5	7
Connecticut .....	-	-	62	-	-	1	1	1	2	8	14
MIDDLE ATLANTIC .....	12	-	393	-	-	4	3	-	41	169	196
Upstate New York .....	5	-	6	-	-	4	2	-	6	40	57
New York City .....	2	-	190	-	-	-	-	-	16	16	37
New Jersey *	5	-	NN	-	-	-	1	-	9	49	64
Pennsylvania .....	-	-	197	-	-	-	-	-	10	64	38
EAST NORTH CENTRAL .....	3	-	2,534	-	-	11	4	2	25	175	175
Ohio .....	-	-	219	-	-	6	-	-	5	23	27
Indiana .....	-	-	256	-	-	1	-	-	2	6	11
Illinois .....	-	-	-	-	-	2	3	1	8	53	51
Michigan .....	3	-	979	-	-	2	1	1	8	82	76
Wisconsin .....	-	-	1,080	-	-	-	-	-	2	11	10
WEST NORTH CENTRAL .....	-	-	1,043	-	4	2	3	-	2	30	29
Minnesota .....	-	-	6	-	-	-	-	-	-	3	2
Iowa .....	-	-	865	-	-	1	-	-	2	8	9
Missouri .....	-	-	56	-	-	-	3	-	-	12	3
North Dakota .....	-	-	45	-	-	-	-	-	-	-	-
South Dakota .....	-	-	6	-	4	-	-	-	-	-	8
Nebraska .....	-	-	-	-	-	-	-	-	-	1	-
Kansas .....	-	-	65	-	-	1	-	-	-	6	7
SOUTH ATLANTIC .....	3	-	716	-	-	1	-	-	12	125	160
Delaware .....	-	-	32	-	-	-	-	-	-	7	4
Maryland .....	1	-	25	-	-	-	-	-	3	16	25
District of Columbia .....	-	-	4	-	-	-	-	-	-	3	2
Virginia .....	-	-	51	-	-	-	-	-	1	17	15
West Virginia .....	-	-	538	-	-	-	-	-	1	9	22
North Carolina .....	1	-	NN	-	-	-	-	-	2	18	31
South Carolina .....	-	-	66	-	-	1	-	-	1	3	9
Georgia .....	-	-	-	-	-	-	-	-	-	19	5
Florida .....	1	-	-	-	-	-	-	-	4	33	47
EAST SOUTH CENTRAL .....	2	-	197	-	-	1	1	-	5	48	54
Kentucky .....	-	-	132	-	-	-	-	-	2	19	18
Tennessee .....	1	-	NN	-	-	-	-	-	-	24	25
Alabama .....	-	-	38	-	-	-	-	-	-	-	6
Mississippi .....	1	-	27	-	-	1	1	-	3	5	5
WEST SOUTH CENTRAL .....	1	-	723	-	1	-	-	-	9	110	108
Arkansas *	-	-	14	-	-	-	-	-	-	3	5
Louisiana *	-	-	NN	-	-	-	-	-	-	4	17
Oklahoma .....	1	-	135	-	-	-	-	-	-	24	14
Texas *	-	-	574	-	1	-	-	-	9	79	72
MOUNTAIN .....	-	-	152	-	-	-	-	-	3	35	54
Montana .....	-	-	14	-	-	-	-	-	-	5	4
Idaho .....	-	-	-	-	-	-	-	-	1	8	5
Wyoming .....	-	-	13	-	-	-	-	-	1	3	1
Colorado .....	-	-	80	-	-	-	-	-	1	3	6
New Mexico .....	-	-	16	-	-	-	-	-	-	6	11
Arizona *	-	-	-	-	-	-	-	-	-	-	15
Utah .....	-	-	25	-	-	-	-	-	-	4	12
Nevada .....	-	-	4	-	-	-	-	-	-	6	-
PACIFIC .....	5	-	440	-	15	5	1	-	38	223	280
Washington .....	-	-	383	-	13	-	-	-	-	17	32
Oregon .....	-	-	8	-	1	-	-	-	-	32	33
California .....	5	-	-	-	1	5	1	-	35	171	196
Alaska *	-	-	20	-	-	-	-	-	-	-	7
Hawaii .....	-	-	29	-	-	-	-	-	3	3	12
Guam *	-	-	-	-	-	-	-	-	-	-	12
Puerto Rico .....	-	-	28	-	-	-	-	-	-	20	6
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Chickenpox: Me. 65, N.H. 4, Ariz. 11, Guam 9

Diphtheria: Tex. delete 1

Encephalitis, primary: (1972) N.J. 1

Hepatitis B: Me. 1, N.H. 2, Ariz. 1, Guam 1

Hepatitis A: Me. 10, N.H. delete 1, Ark. 5, Ariz. 40, Guam 1,  
(1972) La. delete 3, Alaska 1

## Morbidity and Mortality Weekly Report

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MARCH 3, 1973 AND MARCH 4, 1972 (9th WEEK) - Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	4	31	791	5,554	6,028	35	276	330	1,958	16,143	953	4,490
NEW ENGLAND .....	-	2	299	2,275	387	1	14	12	53	590	61	405
Maine *	-	-	-	9	68	-	-	2	1	19	-	17
New Hampshire *	-	-	52	384	24	-	1	-	-	34	-	5
Vermont .....	-	1	4	30	54	-	1	-	2	80	-	5
Massachusetts .....	-	-	112	1,110	40	-	5	5	31	247	28	214
Rhode Island .....	-	-	23	192	74	1	1	5	9	68	-	7
Connecticut .....	-	1	108	550	127	-	6	-	10	142	33	157
MIDDLE ATLANTIC .....	1	6	68	419	383	6	37	35	197	1,493	84	447
Upstate New York .....	1	3	25	85	36	1	9	10	NN	NN	2	40
New York City .....	-	1	31	253	66	2	9	7	144	935	13	48
New Jersey *	-	1	2	48	266	2	9	9	26	331	57	315
Pennsylvania .....	-	1	10	33	15	1	10	9	27	227	12	44
EAST NORTH CENTRAL .....	1	4	204	1,527	2,426	6	27	37	535	4,617	239	1,070
Ohio .....	-	-	3	78	66	2	16	14	47	602	13	110
Indiana .....	1	1	7	136	519	-	1	7	15	393	45	229
Illinois .....	-	2	60	518	732	2	3	6	122	865	19	133
Michigan .....	-	1	90	505	398	2	7	9	157	1,261	90	267
Wisconsin .....	-	-	44	290	711	-	-	1	194	1,496	72	331
WEST NORTH CENTRAL .....	-	-	15	140	252	3	24	26	323	1,555	62	428
Minnesota .....	-	-	-	10	9	-	-	5	-	34	22	57
Iowa .....	-	-	8	105	145	-	3	-	192	1,120	20	96
Missouri .....	-	-	5	9	66	2	13	4	108	232	-	166
North Dakota .....	-	-	2	8	20	1	1	-	1	25	2	26
South Dakota .....	-	-	-	-	2	-	2	1	3	6	-	2
Nebraska .....	-	-	-	1	6	-	1	5	2	33	18	60
Kansas .....	-	-	-	7	4	-	4	11	17	105	-	21
SOUTH ATLANTIC .....	-	5	24	165	577	4	42	72	169	1,778	68	353
Delaware .....	-	-	-	1	3	-	-	1	17	111	-	2
Maryland .....	-	-	-	-	5	-	10	8	29	246	-	6
District of Columbia .....	-	-	-	1	-	-	1	2	-	6	-	1
Virginia *	-	4	-	7	10	-	4	16	10	157	1	14
West Virginia .....	-	-	15	45	35	-	-	5	74	657	3	52
North Carolina .....	-	1	-	4	16	-	9	14	NN	NN	1	7
South Carolina .....	-	-	2	16	91	1	3	7	11	77	1	10
Georgia .....	-	-	-	7	20	-	8	-	-	7	1	4
Florida .....	-	-	7	84	397	3	7	19	28	517	61	257
EAST SOUTH CENTRAL .....	-	1	10	117	285	1	16	26	129	1,243	23	278
Kentucky .....	-	-	8	32	127	-	4	6	36	327	-	129
Tennessee .....	-	-	2	62	32	1	8	12	50	398	12	122
Alabama .....	-	1	-	-	78	-	2	6	20	170	10	18
Mississippi .....	-	-	-	23	48	-	2	2	23	348	1	9
WEST SOUTH CENTRAL .....	-	5	14	222	364	7	43	48	173	1,225	87	377
Arkansas .....	-	-	-	4	6	2	4	6	8	40	-	8
Louisiana *	-	1	2	15	12	-	4	15	5	16	13	13
Oklahoma .....	-	-	2	6	2	1	3	2	19	82	3	25
Texas .....	-	4	10	197	344	4	32	25	141	1,087	71	331
MOUNTAIN .....	-	2	71	178	469	-	9	5	80	897	160	341
Montana .....	-	1	-	1	11	-	1	-	5	73	1	9
Idaho .....	-	-	44	59	3	-	-	2	11	51	-	4
Wyoming .....	-	-	3	5	-	-	-	1	2	233	-	-
Colorado .....	-	-	17	39	208	-	2	-	5	69	111	197
New Mexico .....	-	1	6	65	34	-	1	1	50	313	45	67
Arizona *	-	-	-	8	120	-	2	-	1	119	-	14
Utah .....	-	-	1	1	93	-	1	1	6	37	3	49
Nevada .....	-	-	-	-	-	-	2	-	-	2	-	1
PACIFIC .....	2	6	86	511	885	7	64	69	299	2,745	169	791
Washington .....	-	-	46	246	230	-	3	8	61	319	38	118
Oregon .....	-	-	15	123	9	2	4	4	68	632	11	119
California .....	2	6	25	138	611	5	56	56	156	1,573	120	548
Alaska .....	-	-	-	-	5	-	1	-	12	184	-	-
Hawaii .....	-	-	-	4	30	-	-	1	2	37	-	6
Guam .....	-	-	-	2	-	-	-	2	-	1	-	1
Puerto Rico .....	-	-	48	356	79	-	1	-	39	165	2	13
Virgin Islands .....	-	-	-	-	-	-	-	2	1	3	-	-

Delayed reports: Measles: Me. 1, N.H. 13, Va. delete 1, (1972) La. delete 1

Mumps: Me. 1, N.H. 1, La. delete 1, Ariz. 17, (1972) La. delete 2

Meningococcal infections: Ariz. 1, (1972) N.J. 1, La. delete 1

Rubella: Me. 7, N.H. delete 1, N.J. 20, Ariz. 7, (1972) La. delete 1

## Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MARCH 3, 1973 AND MARCH 4, 1972 (9th WEEK) - Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
									GONOR- RHEA	SYPHILIS (Pri. & Sec.)		
		Cumulative 1973	1973		1973	Cum. 1973	1973	Cum. 1973	1973	1973	1973	Cum. 1973
UNITED STATES	10	660	4,881	14	12	38	1	5	14,362	554	56	506
NEW ENGLAND	-	18	166	-	2	3	-	-	314	10	5	31
Maine	-	-	10	-	-	-	-	-	23	-	1	24
New Hampshire	-	2	4	-	-	-	-	-	17	-	4	6
Vermont	-	-	3	-	-	-	-	-	5	-	-	-
Massachusetts	-	15	106	-	2	3	-	-	177	8	-	1
Rhode Island	-	-	9	-	-	-	-	-	18	-	-	-
Connecticut	-	1	34	-	-	-	-	-	74	2	-	-
MIDDLE ATLANTIC	3	131	1,016	-	1	5	-	1	1,873	120	-	4
Upstate New York	-	18	221	-	-	-	-	-	459	15	-	1
New York City	1	33	327	-	1	5	-	-	673	74	-	-
New Jersey	2	19	206	-	-	-	-	-	227	17	-	-
Pennsylvania	-	61	262	-	-	-	-	1	514	14	-	3
EAST NORTH CENTRAL	1	103	776	1	2	4	-	-	1,442	29	2	39
Ohio *	-	40	305	1	1	2	-	-	424	-	-	9
Indiana	-	17	118	-	-	-	-	-	174	9	-	6
Illinois	-	29	212	-	1	1	-	-	107	7	1	11
Michigan	-	17	119	-	-	1	-	-	569	10	-	-
Wisconsin	1	-	22	-	-	-	-	-	168	3	1	13
WEST NORTH CENTRAL	3	35	180	2	1	1	-	1	806	4	17	148
Minnesota	-	4	15	-	-	-	-	-	183	3	4	52
Iowa	-	2	26	-	-	-	-	-	-	-	6	49
Missouri	3	27	88	2	-	-	-	1	230	-	1	14
North Dakota	-	-	5	-	-	-	-	-	9	-	6	29
South Dakota	-	1	12	-	1	1	-	-	47	-	-	3
Nebraska	-	-	11	-	-	-	-	-	199	-	-	-
Kansas	-	1	23	-	-	-	-	-	138	1	-	1
SOUTH ATLANTIC	2	102	974	3	1	6	1	1	4,093	233	4	50
Delaware	-	2	11	-	-	-	1	1	59	6	-	-
Maryland	-	-	96	-	-	-	-	-	344	8	-	2
District of Columbia	-	3	50	-	-	-	-	-	280	17	-	-
Virginia *	-	10	119	1	-	-	-	-	437	61	2	20
West Virginia	-	11	54	-	-	-	-	-	39	-	-	8
North Carolina *	-	22	172	1	-	1	-	-	822	14	-	-
South Carolina	-	8	100	-	-	1	-	-	577	30	-	-
Georgia	-	16	154	1	-	1	-	-	581	44	2	13
Florida	2	30	218	-	1	3	-	-	954	53	-	7
EAST SOUTH CENTRAL	1	71	418	4	-	1	-	2	1,294	24	13	118
Kentucky *	-	25	103	1	-	-	-	-	122	10	5	46
Tennessee	-	30	126	3	-	-	-	1	484	9	7	50
Alabama	1	7	123	-	-	1	-	1	399	-	1	22
Mississippi	-	9	66	-	-	-	-	-	289	5	-	-
WEST SOUTH CENTRAL	-	67	469	4	1	2	-	-	1,731	57	12	72
Arkansas	-	7	58	1	-	-	-	-	96	3	3	19
Louisiana *	-	2	103	-	-	-	-	-	469	20	2	5
Oklahoma	-	5	39	2	-	1	-	-	155	5	3	17
Texas	-	53	269	1	1	1	-	-	1,011	29	4	31
MOUNTAIN	-	23	95	-	-	2	-	-	474	14	-	6
Montana	-	-	4	-	-	-	-	-	37	-	-	-
Idaho	-	3	10	-	-	-	-	-	52	1	-	-
Wyoming	-	-	6	-	-	-	-	-	6	-	-	-
Colorado	-	-	15	-	-	-	-	-	160	8	-	-
New Mexico	-	4	35	-	-	1	-	-	66	3	-	-
Arizona *	-	13	13	-	-	1	-	-	100	1	-	-
Utah	-	2	6	-	-	-	-	-	32	1	-	6
Nevada	-	1	6	-	-	-	-	-	21	-	-	-
PACIFIC	-	110	787	-	4	14	-	-	2,335	63	3	38
Washington	-	11	65	-	-	-	-	-	208	3	-	-
Oregon	-	8	38	-	-	1	-	-	256	1	-	-
California	-	68	615	-	4	13	-	-	1,795	58	3	36
Alaska	-	17	25	-	-	-	-	-	42	-	-	2
Hawaii	-	6	44	-	-	-	-	-	34	1	-	-
Guam *	-	-	3	-	-	-	-	-	-	-	-	-
Puerto Rico	3	10	98	-	-	-	-	-	12	19	-	-
Virgin Islands	-	-	-	-	-	-	-	-	8	1	-	-

\*Delayed reports: TB: Ohio delete 1, Ariz. delete 54, (1972) N.C. delete 1, Ky. delete 1, Ariz. 54

Typhoid: Ariz. 1

RMSE: (1972) Va. delete 1

Gonorrhea: Ariz. 163, Guam 7, (1972) La. delete 12

Syphilis: Ohio delete 1

Rabies: Ariz. 2

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING MARCH 3, 1973

Week No.

9

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	712	459	23	60	SOUTH ATLANTIC	1,496	815	43	63
Boston, Mass.	197	106	8	16	Atlanta, Ga.	184	85	8	4
Bridgeport, Conn.	38	27	1	2	Baltimore, Md.	292	150	7	3
Cambridge, Mass.	27	25	1	3	Charlotte, N. C.	63	33	3	1
Fall River, Mass.	26	15	—	—	Jacksonville, Fla.	98	59	2	1
Hartford, Conn.	66	42	2	4	Miami, Fla.	127	78	3	7
Lowell, Mass.	32	21	1	5	Norfolk, Va.	63	31	2	2
Lynn, Mass.	27	19	—	3	Richmond, Va.	97	51	2	7
New Bedford, Mass.	34	25	—	4	Savannah, Ga.	57	31	1	6
New Haven, Conn.	54	35	3	3	St. Petersburg, Fla.	98	80	3	3
Providence, R. I.	66	38	3	6	Tampa, Fla.	98	60	2	17
Somerville, Mass.	22	21	—	2	Washington, D. C.	250	121	7	9
Springfield, Mass.	43	26	1	8	Wilmington, Del.	69	36	3	3
Waterbury, Conn.	27	19	2	—					
Worcester, Mass.	53	40	1	4	EAST SOUTH CENTRAL	805	467	30	62
MIDDLE ATLANTIC	3,479	2,131	89	173	Birmingham, Ala.	128	81	7	5
Albany, N. Y.	47	27	1	5	Chattanooga, Tenn.	66	38	1	7
Allentown, Pa.	31	23	—	2	Knoxville, Tenn.	52	33	—	3
Buffalo, N. Y.	149	85	3	11	Louisville, Ky.	153	86	5	18
Camden, N. J.	51	38	—	3	Memphis, Tenn.	168	98	5	4
Elizabeth, N. J.	31	21	—	6	Mobile, Ala.	70	38	1	2
Erie, Pa.	40	26	—	5	Montgomery, Ala.	45	23	2	9
Jersey City, N. J.	71	48	1	4	Nashville, Tenn.	123	70	9	14
Newark, N. J.	75	41	3	3	WEST SOUTH CENTRAL	1,420	782	81	68
New York City, N. Y.†	1,747	1,092	39	71	Austin, Tex.	41	25	2	3
Paterson, N. J.	25	19	1	3	Baton Rouge, La.	62	39	2	4
Philadelphia, Pa.	626	347	24	9	Corpus Christi, Tex.	30	18	4	—
Pittsburgh, Pa.	191	112	6	14	Dallas, Tex.	190	85	7	7
Reading, Pa.	51	39	—	9	El Paso, Tex.	40	26	3	6
Rochester, N. Y.	129	79	5	14	Fort Worth, Tex.	115	79	3	4
Schenectady, N. Y.	29	18	—	—	Houston, Tex.	305	145	28	12
Scranton, Pa.	28	15	1	4	Little Rock, Ark.	67	33	—	4
Syracuse, N. Y.	79	43	3	3	New Orleans, La.	160	79	7	3
Trenton, N. J.	38	26	2	—	Oklahoma City, Okla.*	99	59	6	3
Utica, N. Y.	23	21	—	4	San Antonio, Tex.	153	79	14	4
Yonkers, N. Y.	18	11	—	3	Shreveport, La.	86	60	3	8
EAST NORTH CENTRAL	2,688	1,521	125	104	Tulsa, Okla.	72	55	2	10
Akron, Ohio	52	30	7	—	MOUNTAIN	597	368	35	44
Canton, Ohio	47	28	1	3	Albuquerque, N. Mex.	59	30	7	7
Chicago, Ill.	687	370	28	11	Colorado Springs, Colo.	30	15	1	2
Cincinnati, Ohio	170	115	4	7	Denver, Colo.	148	101	11	15
Cleveland, Ohio	219	119	16	4	Las Vegas, Nev.	26	14	—	—
Columbus, Ohio	179	90	14	13	Ogden, Utah	21	13	3	5
Dayton, Ohio	116	63	5	5	Phoenix, Ariz.	139	87	8	4
Detroit, Mich.	361	190	19	7	Pueblo, Colo.	22	15	1	5
Evansville, Ind.	44	29	—	4	Salt Lake City, Utah	72	41	4	3
Fort Wayne, Ind.	49	34	2	8	Tucson, Ariz.	80	52	—	3
Gary, Ind.	43	16	2	4	PACIFIC	2,170	1,346	67	102
Grand Rapids, Mich.	49	32	2	2	Berkeley, Calif.	18	12	1	—
Indianapolis, Ind.	161	97	5	6	Fresno, Calif.	50	25	2	1
Madison, Wis.	48	26	2	6	Glendale, Calif.	49	34	2	2
Milwaukee, Wis.	139	95	1	4	Honolulu, Hawaii	62	32	3	3
Peoria, Ill.	44	21	3	3	Long Beach, Calif.	135	83	2	1
Rockford, Ill.	42	20	7	3	Los Angeles, Calif.	861	524	28	37
South Bend, Ind.	46	29	4	6	Oakland, Calif.	75	46	3	—
Toledo, Ohio	120	71	3	6	Pasadena, Calif.	44	31	1	2
Youngstown, Ohio	72	46	—	2	Portland, Oreg.	158	103	2	10
WEST NORTH CENTRAL	882	564	33	36	Sacramento, Calif.	66	40	3	—
Des Moines, Iowa	56	36	2	2	San Diego, Calif.	104	69	4	2
Duluth, Minn.	43	32	—	—	San Francisco, Calif.	171	101	3	8
Kansas City, Kans.	48	26	4	—	San Jose, Calif.	53	32	1	—
Kansas City, Mo.	141	88	6	6	Seattle, Wash.	211	135	6	20
Lincoln, Nebr.	30	19	—	4	Spokane, Wash.	61	44	5	9
Minneapolis, Minn.	128	89	3	11	Tacoma, Wash.	52	35	1	7
Omaha, Nebr.	78	49	5	3	Total	14,249	8,453	526	712
St. Louis, Mo.	248	152	11	2	Expected Number	13,466	7,893	545	581
St. Paul, Minn.	82	59	2	6	Cumulative Total (includes reported corrections for previous weeks)	130,835	78,876	4,576	7,408
Wichita, Kans.	28	14	—	2					

†Delayed report for week ended Feb. 24, 1973

\*Estimate based on average percent of divisional total

**SALMONELLA SONNEI – Continued**

breaks and 6.7% of all reported cases were due to shigella. Although shigella ranked below staphylococcus, *Clostridium perfringens*, salmonella, and *C. botulinum* as the causative organism in outbreaks of foodborne illness from bacterial contamination, it may account for significant morbidity. In 1971, foodborne shigellosis caused an average of 100 cases of clinical illness per outbreak.

Because of early discarding of implicated food, poor culture techniques, competing organisms, and adverse growth

conditions, shigella is recovered less frequently from the food vehicle itself than from patients or food handlers (2). In 1970, shigella was recovered from food in only 1 of 7 outbreaks (1, 2).

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1. Center for Disease Control: Foodborne Outbreaks, Annual Summary 1971, Oct 1972
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3. Center for Disease Control: Foodborne Outbreaks, Annual Summary 1970, Oct 1971

### CURRENT TRENDS INFLUENZA – Washington, Worldwide

**Washington**

The Washington State Health Department reports several cases of influenza B in Metaline Falls in northeastern Washington. In late January and early February, the town had a widespread outbreak of influenza A resulting in the closing of schools for several days. During this influenza A outbreak, 4 seroconversions to influenza B were noted. Clinically, illness from influenza B was indistinguishable from that caused by influenza A.

(Reported by Frank Hammerstrom, M.D., private physician; R. B. Morrow M.D., Health Director, Pendoreille County Health Department; Marshall Kramers, M.D., Acting Chief, Communicable Diseases Division, Washington Department of Social and Health Services, Health Services Division.)

**Worldwide**

The World Health Organization reports that influenza activity is "reduced or nil" in all countries reporting to them. (Reported by the World Health Organization: Weekly Epidemiological Record, Vol. 48, No. 9, March 2, 1973.)

**Editorial Note**

Influenza B has been reported from California, Colorado, Hawaii, Oregon, and Wisconsin this year, but only Hawaii appears to have had a significant number of cases (MMWR, Vol. 21, No. 52). Influenza caused by A/England/42/72 continues to decline, and influenza-pneumonia related deaths reported from 122 U.S. cities are also decreasing. This week, 131 excess deaths due to pneumonia-influenza were recorded, raising this season's total to 2,198; last season's total was 1,900.

The Morbidity and Mortality Weekly Report, circulation 30,500, is published by the Center for Disease Control, Atlanta, Ga.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to:

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Attn: Editor  
Morbidity and Mortality Weekly Report  
Atlanta, Georgia 30333

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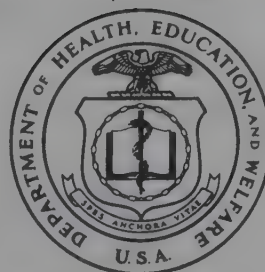
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ATLANTA, GEORGIA 30333

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# Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

DATE OF RELEASE: MARCH 16, 1973 — ATLANTA, GEORGIA 30333

## EPIDEMIOLOGIC NOTES AND REPORTS FOLLOW-UP ON TYPHOID FEVER — Florida

As of March 14, 1973, 213 persons had been hospitalized as a result of the waterborne outbreak of typhoid fever at the South Dade Migrant Farm Labor Camp, Homestead, Florida (MMWR, Vol. 22, No. 9). *Salmonella typhi* has been isolated from 133 patients, and 4-fold rises in antibody titers to group D salmonella O antigens have been demonstrated in 2 additional cases. The onset of illness in all but 3 confirmed cases occurred on or before March 3; the latest confirmed case had its onset on March 6. No deaths have occurred. Antibiotic susceptibility testing has shown the epidemic strain to be multiply sensitive, and phage typing of the isolate from the case in January (see Errata, p. 92) and from 2 cases occurring during the peak of the outbreak has shown a common phage type, E<sub>1</sub>.

Four of the confirmed cases occurred in persons not living in the camp at the time of the onset of symptoms; how-

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ever all 4 had exposure to the camp's water supplies in the early part of February.

(Reported by Milton S. Saslaw, M.D., Director, Joel L. Nitzkin, M.D., Chief, Office of Consumer Protection, Diane Eisman, M.D., Acting Head, Disease Control Section, Kenneth Pfeiffer, Assistant Head, Engineering Section, Dade County Department of Public Health; Ralph D. Hogan, M.D., State Epidemiologist, Florida Division of Health; and 2 EIS Officers.)

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	10th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 10 WEEKS		
	March 10, 1973	March 11, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	40	31	28	360	351	293
Brucellosis	1	—	2	17	16	16
Chickenpox	6,120	5,155	—	50,762	36,292	—
Diphtheria	27	4	4	49	25	28
Encephalitis, primary:						
Arthropod-borne and unspecified	19	10	16	165	151	190
Encephalitis, post-infectious	1	5	5	35	45	56
Hepatitis, serum (Hepatitis B)	120	174	133	1,315	1,872	1,220
Hepatitis, infectious (Hepatitis A)	920	1,081	1,050	9,481	10,926	10,879
Malaria	5	21	54	36	320	465
Measles (rubeola)	805	953	949	6,362	6,981	6,977
Meningococcal infections, total	40	24	77	317	354	679
Civilian	40	21	72	306	342	634
Military	—	3	5	11	12	51
Mumps	2,226	2,288	2,843	18,437	20,979	25,456
Rubella (German measles)	1,128	849	1,542	5,621	5,686	8,230
Tetanus	—	3	3	10	14	14
Tuberculosis, new active	584	675	—	5,462	5,642	—
Tularemia	1	3	1	15	22	22
Typhoid fever	11	3	2	49	48	43
Typhus, tick-borne (Rky. Mt. spotted fever)	1	1	—	6	10	3
Venereal Diseases:						
Gonorrhea	13,119	14,235	—	142,425	128,504	—
Syphilis, primary and secondary	489	466	—	5,190	4,281	—
Rabies in animals	56	83	83	562	705	705

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax: Kans. — 1	1	Poliomyelitis, total:	—
Botulism:	—	Paralytic:	—
Congenital rubella syndrome: Calif. — 1	7	Psittacosis:	3
Leprosy: Calif. — 1, Tex. — 1	23	Rabies in man:	—
Leptospirosis: Calif. — 1, R.I. — 2	9	Trichinosis: N.Y.C. — 8	18
Plague:	—	Typhus, murine: * Tex. — 1	4

\*Delayed report: Typhus, murine: Mass. 1

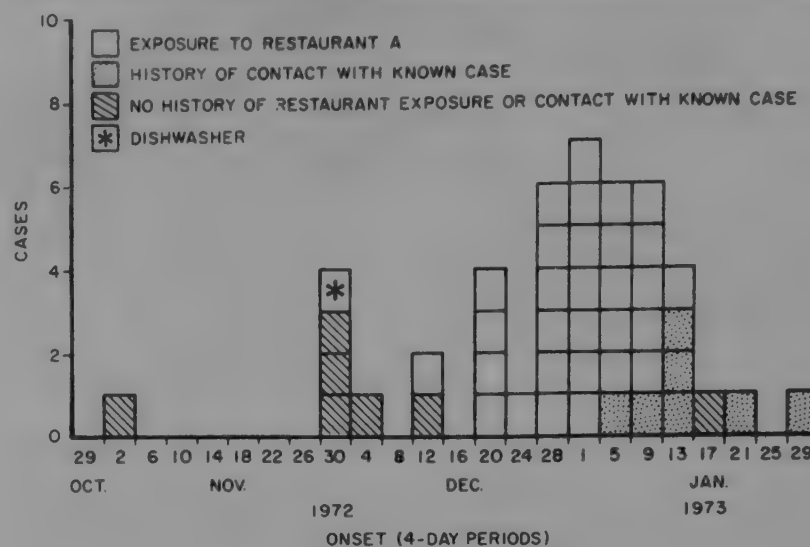
## COMMON SOURCE OUTBREAK OF HEPATITIS-A — Ohio

Between Dec. 1, 1972, and Jan. 30, 1973, 44 cases of hepatitis-A were reported in Ashtabula County, Ohio (Figure 1). All diagnoses were based on characteristic clinical symptoms and laboratory data compatible with hepatitis-A. Sera from 3 acute cases were negative for the hepatitis-B antigen. Sixty percent of the ill individuals were males, and 22 cases were in the 11- to 30-year age group. Fifteen cases occurred in Ashtabula Township, and the remaining cases were distributed among 7 of the county's 28 townships near Ashtabula. In 1970, 36 cases of hepatitis were reported from this county, and in 1971, the total was 35. Thirty cases of hepatitis were reported in the 1st 10 months of 1972.

Epidemiologic investigation revealed that 30 of the 44 ill individuals had eaten at a small, centrally located family restaurant (Restaurant A) in Ashtabula Township. No other restaurant in the county had been visited by more than 2 patients. In addition, 29 of these 30 ill individuals recalled eating at Restaurant A in the 4-day period between November 29 and December 2, and 16 of 17 ill persons who had eaten only once at Restaurant A had eaten there in this 4-day period. Furthermore, an Ashtabula business firm had held a banquet at Restaurant A on November 29, and 11 of 24 persons attending developed hepatitis 3-6 weeks afterwards, for an attack rate of 46%. Food specific attack rates for the banquet showed that those people who had eaten tossed salad were at significantly greater risk of developing hepatitis than those who had not eaten tossed salad ( $p = 0.045$ ); no other food or drink, including water and iced drinks, was implicated.

Restaurant employees were subsequently interviewed, and it was discovered that a 17-year-old dishwasher had had symptoms of hepatitis on December 3. On November 29, the evening of the banquet, he had prepared tossed salad and scooped ice for ice water in addition to washing dishes. At the peak of the outbreak, a 2nd food handler at Restaurant A became ill with hepatitis; however, no restaurant-related cases

Figure 1  
HEPATITIS-A CASES, BY DATE OF ONSET  
ASHTABULA COUNTY, OHIO — NOVEMBER 1972-JANUARY 1973



have been reported in the 5 weeks following this worker's date of onset.

To control the outbreak, Restaurant A was temporarily closed, and close contacts of the cases were given immune serum globulin.

(Reported by John Starr, M.D., Health Commissioner, Joyce Dini, P.H.N., and Doris Lewis, P.H.N., Ashtabula County Health Department; Frank Veroni, M.D., Health Commissioner, Ashtabula City Health Department; John H. Ackerman, M.D., State Epidemiologist, Ohio Department of Health; and an EIS Officer.)

## Editorial Note

Recognized outbreaks of hepatitis-A due to common-source vehicles are uncommon. Seven additional common source outbreaks of hepatitis-A, 4 foodborne and 3 waterborne, were reported to CDC during 1972. Uncooked foods such as salads account for most foodborne outbreaks.

## HOOKWORM DISEASE — Alabama

In January 1972, a school nurse in Monroe County, Alabama, noted loss of appetite, weakness, pallor, and poor school performance in a 14-year-old student. She subsequently visited the child's home and examined all family members, 2 parents and 6 children, age 2 to 16 years. The weights of 5 of the children were below the 2nd percentile, and blood specimens from 4 children showed that 1 had a hemoglobin of 4 gm, 2 had hemoglobins of 6 gm, and 1, 7 gm. Stool specimens were obtained from all 8 family members, and hookworm eggs were identified in specimens from all except the father. The infected individuals were treated with blood transfusions, tetrachlorethylene, and iron supplements, and all showed a marked increase in appetite, activity, and sense of well-being.

The family lived in a rural setting without an adequate latrine. All admitted to indiscriminate defecation, and all except the father, who had a skin condition which necessitated his wearing shoes, customarily went barefoot. One child reported eating dirt and chewing wood. Following the investigation, the family was assisted in relocating to a new low rent housing project.

Further investigation in the community revealed 8 additional cases of hookworm disease in 2 neighboring families. In 1 family, 3 of 5 children 6, 7, and 8 years of age had stool examinations which were positive for hookworm ova; in the other family, 5 of 6 children 7 to 13 years of age were similarly infected.

Monroe County is in the Alabama coastal plain, an area characterized by sandy soil, warm temperatures, and abundant rainfall. Approximately 1/3 of the families have an income below the poverty level, 1/3 do not have a flush toilet, and 1/3 have no access to a bathtub or shower. One of every 5 adult males 25 years of age or older has completed 4 years or less of formal education (1). In a survey of school children of the coastal plain in 1951-52, 17% were found to be infected with hookworm (2).

(Reported by Melba Lundy, R.N., Title I, school nurse; W. W. Eddins, M.D., private physician; Ruth Kilpatrick, R.N., Nursing Supervisor, and E. F. Goldsmith, M.D., Health Officer, Monroe County Health Department; Thomas H. Hosty, Ph.D., Director, Department of Health Laboratories, and Frederick

*S. Wolf, M.D., State Epidemiologist, Alabama Department of Public Health; and an EIS Officer.)*

#### Editorial Note

These cases indicate hookworm infections still exist in the United States more than 50 years after an intensive hookworm eradication program in the South (3). There is no comprehensive data on the current status of hookworm disease in previously endemic states; however, 1 recent survey (4,5) demonstrated a reduced prevalence of hookworm infection but a persistence of endemic foci. Infections should be treated individually, but when a diagnosis is made, all family members should be subsequently examined. Although hookworm infection can be a cause of anemia and malnutrition, many infections in this country often do not exhibit

significant morbidity (4); this may be due in part to adequate nutritional intake and low worm burdens (number of viable worms).

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4. Martin LK: Hookworm in Georgia. I. Survey of intestinal helminth infections and anemia in rural school children. Am J Trop Med Hyg 21:919-929, 1972
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### SUMMARY OF REPORTED CASES OF INFECTIOUS SYPHILIS

CASES OF PRIMARY AND SECONDARY SYPHILIS: By Reporting Area — February 1973 and February 1972 — Provisional Data

Reporting Area	February		Cumulative Jan.-Feb.		Reporting Area	February		Cumulative Jan.-Feb.	
	1973	1972	1973	1972		1973	1972	1973	1972
<b>NEW ENGLAND</b> .....	101	78	212	141	<b>EAST SOUTH CENTRAL</b> .....	121	97	235	212
Maine .....	3	2	4	3	Kentucky .....	35	15	76	25
New Hampshire .....	2	—	4	—	Tennessee .....	29	32	60	102
Vermont .....	3	—	6	—	Alabama .....	11	21	22	28
Massachusetts .....	67	44	147	74	Mississippi .....	46	29	77	57
Rhode Island .....	2	4	4	4	<b>WEST SOUTH CENTRAL</b> .....	261	232	465	504
Connecticut .....	24	28	47	60	Arkansas .....	19	23	29	51
<b>MIDDLE ATLANTIC</b> .....	429	422	967	862	Louisiana .....	80	48	139	116
Upstate New York .....	35	30	73	70	Oklahoma .....	24	8	37	15
New York City .....	266	273	620	566	Texas .....	138	153	260	322
Pa. (Excl. Phila.) .....	23	14	46	28	<b>MOUNTAIN</b> .....	47	33	115	67
Philadelphia .....	35	32	73	55	Montana .....	—	1	—	1
New Jersey .....	70	73	155	143	Idaho .....	—	—	2	1
<b>EAST NORTH CENTRAL</b> .....	215	205	388	444	Wyoming .....	—	1	—	3
Ohio .....	33	31	47	48	Colorado .....	21	2	50	4
Indiana .....	21	14	52	25	New Mexico .....	7	8	15	20
Downstate Illinois .....	21	14	38	28	Arizona .....	14	16	37	29
Chicago .....	92	78	142	189	Utah .....	2	1	2	1
Michigan .....	42	64	91	148	Nevada .....	3	4	9	8
Wisconsin .....	6	4	18	6	<b>PACIFIC</b> .....	322	242	737	537
<b>WEST NORTH CENTRAL</b> .....	20	14	49	45	Washington .....	7	4	31	15
Minnesota .....	7	4	17	5	Oregon .....	5	6	10	8
Iowa .....	2	—	4	2	California .....	304	227	682	506
Missouri .....	2	7	16	28	Alaska .....	2	1	3	1
North Dakota .....	—	—	—	—	Hawaii .....	4	4	11	7
South Dakota .....	—	—	1	—	<b>U.S. TOTAL</b> .....	2,024	1,812	4,220	3,800
Nebraska .....	—	—	1	3	<b>TERRITORIES</b> .....	68	74	143	139
Kansas .....	9	3	10	7	Puerto Rico .....	66	69	136	127
<b>SOUTH ATLANTIC</b> .....	508	489	1,052	988	Virgin Islands .....	2	5	7	12
Delaware .....	7	5	15	8	Note: Cumulative Totals include revised and delayed reports through previous months.				
Maryland .....	68	60	143	139					
District of Columbia .....	65	64	127	127					
Virginia .....	40	37	112	66					
West Virginia .....	—	1	2	2					
North Carolina .....	46	36	111	83					
South Carolina .....	77	40	108	91					
Georgia .....	79	122	186	266					
Florida .....	126	124	248	206					

#### EPIDEMIOLOGIC NOTES AND REPORTS

##### BOTULISM TYPE B IN COMMERCIALY CANNED MUSHROOMS — United States

On March 9, 1973, Fred Mushroom Products Company recalled canned mushroom products produced in its South Lebanon, Ohio plant following the discovery of botulinum type B spores in 1 4-oz can by the Food and Drug Adminis-

tration. The recalled products were sliced whole mushrooms and mushroom pieces and stems packed in 2-, 4-, 8-, and 16-oz and #10 cans, steak sauce in 7- and 13 1/2-oz cans,

(Continued on page 92)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MARCH 10, 1973 AND MARCH 11, 1972 (10th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
				1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES . . . . .	40	1	6,120	27	49	19	10	1	120	920	1,081
NEW ENGLAND . . . . .	1	-	814	-	2	1	1	-	5	54	75
Maine* . . . . .	-	-	30	-	-	-	-	-	-	-	4
New Hampshire* . . . . .	-	-	26	-	-	-	-	-	-	4	4
Vermont . . . . .	-	-	39	-	-	-	-	-	-	6	3
Massachusetts . . . . .	1	-	303	-	-	1	-	-	2	19	42
Rhode Island . . . . .	-	-	84	-	2	-	-	-	1	7	8
Connecticut . . . . .	-	-	332	-	-	-	1	-	2	18	14
MIDDLE ATLANTIC . . . . .	9	-	165	-	-	3	2	-	31	137	145
Upstate New York . . . . .	-	-	4	-	-	2	-	-	3	22	-
New York City . . . . .	1	-	158	-	-	1	-	-	9	17	38
New Jersey . . . . .	8	-	NN	-	-	-	1	-	10	54	68
Pennsylvania . . . . .	-	-	3	-	-	-	1	-	9	44	39
EAST NORTH CENTRAL . . . . .	2	-	2,111	-	-	4	1	-	25	151	221
Ohio . . . . .	-	-	135	-	-	-	-	-	2	27	50
Indiana* . . . . .	-	-	311	-	-	-	1	-	-	12	22
Illinois . . . . .	-	-	-	-	-	-	-	-	7	41	55
Michigan . . . . .	2	-	643	-	-	4	-	-	11	61	88
Wisconsin . . . . .	-	-	1,022	-	-	-	-	-	5	10	6
WEST NORTH CENTRAL . . . . .	1	-	780	-	4	1	-	-	11	39	28
Minnesota . . . . .	1	-	35	-	-	1	-	-	8	5	5
Iowa . . . . .	-	-	548	-	-	-	-	-	1	2	2
Missouri . . . . .	-	-	70	-	-	-	-	-	1	16	7
North Dakota . . . . .	-	-	34	-	-	-	-	-	-	-	2
South Dakota . . . . .	-	-	-	-	4	-	-	-	-	2	-
Nebraska . . . . .	-	-	33	-	-	-	-	-	-	-	2
Kansas . . . . .	-	-	60	-	-	-	-	-	1	14	10
SOUTH ATLANTIC . . . . .	9	1	483	-	-	-	3	-	9	119	176
Delaware . . . . .	-	-	9	-	-	-	-	-	-	4	1
Maryland . . . . .	-	-	-	-	-	-	-	-	-	-	-
District of Columbia . . . . .	-	-	8	-	-	-	2	-	-	-	24
Virginia* . . . . .	-	1	38	-	-	-	-	-	-	-	3
West Virginia . . . . .	-	-	404	-	-	-	-	-	2	14	21
North Carolina . . . . .	1	-	NN	-	-	-	-	-	-	6	6
South Carolina . . . . .	-	-	24	-	-	-	-	-	3	38	48
Georgia . . . . .	-	-	-	-	-	-	-	-	-	14	13
Florida . . . . .	8	-	-	-	-	-	1	-	-	19	15
EAST SOUTH CENTRAL . . . . .	4	-	383	-	-	1	-	-	-	74	56
Kentucky . . . . .	-	-	355	-	-	-	-	-	-	21	18
Tennessee . . . . .	4	-	NN	-	-	-	-	-	-	33	32
Alabama . . . . .	-	-	22	-	-	-	-	-	-	12	-
Mississippi . . . . .	-	-	6	-	-	1	-	-	-	8	6
WEST SOUTH CENTRAL . . . . .	2	-	776	-	1	4	-	-	5	124	83
Arkansas* . . . . .	-	-	-	-	-	-	-	-	-	3	12
Louisiana . . . . .	-	-	NN	-	-	-	-	-	5	9	4
Oklahoma . . . . .	1	-	65	-	-	1	-	-	-	27	9
Texas . . . . .	1	-	711	-	1	3	-	-	-	85	58
MOUNTAIN . . . . .	-	-	141	-	-	-	-	-	3	35	82
Montana . . . . .	-	-	16	-	-	-	-	-	-	10	5
Idaho . . . . .	-	-	-	-	-	-	-	-	-	4	9
Wyoming . . . . .	-	-	19	-	-	-	-	-	-	-	-
Colorado . . . . .	-	-	78	-	-	-	-	-	-	-	-
New Mexico . . . . .	-	-	28	-	-	-	-	-	1	11	27
Arizona* . . . . .	-	-	-	-	-	-	-	-	1	3	4
Utah* . . . . .	-	-	-	-	-	-	-	-	-	1	11
Nevada . . . . .	-	-	-	-	-	-	-	-	-	1	9
PACIFIC . . . . .	12	-	467	27	42	5	3	1	31	187	215
Washington . . . . .	-	-	356	27	40	-	-	1	1	36	31
Oregon . . . . .	-	-	-	-	1	1	-	-	5	35	38
California . . . . .	12	-	-	-	1	4	2	-	25	112	142
Alaska* . . . . .	-	-	28	-	-	-	-	-	-	-	2
Hawaii . . . . .	-	-	83	-	-	-	1	-	-	4	2
Guam* . . . . .	-	-	-	-	-	-	-	-	-	-	1
Puerto Rico . . . . .	-	-	26	-	-	-	-	-	3	20	10
Virgin Islands . . . . .	-	-	-	-	-	-	-	-	-	2	-

\*Delayed reports: Aseptic meningitis: Ariz. 1

Chickenpox: Me. 7, N.H. 118, Ark. 9, Ariz. 32, Guam 4

Encephalitis, primary: Ariz. 1

Hepatitis B: Ark. 2, Utah delete 9, (1972) Alaska 1

Hepatitis A: Me. 3, N.H. delete 1, Ind. delete 1, Va. delete 2, Ark. 1, Ariz. 36

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MARCH 10, 1973 AND MARCH 11, 1972 (10th WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	5	36	805	6,362	6,981	40	317	354	2,226	18,437	1,128	5,621
NEW ENGLAND .....	2	4	370	2,649	455	2	16	14	124	751	150	555
Maine *	—	—	1	10	72	—	—	2	2	24	—	17
New Hampshire *	—	—	100	488	24	—	1	—	11	79	—	5
Vermont .....	1	2	27	57	54	1	2	—	8	88	1	6
Massachusetts .....	—	—	151	1,261	61	1	6	7	62	309	72	286
Rhode Island .....	—	—	26	218	83	—	1	5	7	75	32	39
Connecticut .....	1	2	65	615	161	—	6	—	34	176	45	202
MIDDLE ATLANTIC .....	—	6	90	509	411	5	42	38	295	1,788	202	649
Upstate New York .....	—	3	30	115	36	2	11	10	NN	NN	4	44
New York City .....	—	1	41	294	74	1	10	8	190	1,125	13	61
New Jersey .....	—	1	10	58	286	—	9	10	35	366	181	496
Pennsylvania .....	—	1	9	42	15	2	12	10	70	297	4	48
EAST NORTH CENTRAL .....	—	4	125	1,652	2,772	1	28	39	461	5,078	216	1,286
Ohio .....	—	—	5	83	78	—	16	15	58	660	8	118
Indiana .....	—	1	40	176	583	—	1	7	44	437	80	309
Illinois .....	—	2	29	547	850	—	3	7	96	961	20	153
Michigan .....	—	1	1	506	478	1	8	9	125	1,386	51	318
Wisconsin .....	—	—	50	340	783	—	—	1	138	1,634	57	388
WEST NORTH CENTRAL .....	—	—	29	169	269	4	29	31	268	1,823	39	467
Minnesota .....	—	—	2	12	10	—	—	7	6	40	5	62
Iowa .....	—	—	15	120	154	—	3	—	180	1,300	13	109
Missouri .....	—	—	1	10	69	1	14	5	17	249	2	168
North Dakota *	—	—	11	19	20	1	3	—	2	27	4	30
South Dakota .....	—	—	—	—	2	—	2	1	—	6	—	2
Nebraska .....	—	—	—	1	6	2	3	5	5	38	15	75
Kansas .....	—	—	—	7	8	—	4	13	58	163	—	21
SOUTH ATLANTIC .....	—	5	36	200	685	14	56	77	251	2,029	35	388
Delaware .....	—	—	—	1	3	—	—	1	11	122	—	2
Maryland .....	---	---	---	—	6	---	10	9	---	246	---	6
District of Columbia *	—	—	—	—	—	—	1	2	2	8	—	1
Virginia .....	—	4	1	8	16	2	6	16	8	165	14	28
West Virginia .....	—	—	7	52	41	1	1	5	110	767	5	57
North Carolina .....	—	1	—	4	16	3	12	15	NN	NN	1	8
South Carolina .....	—	—	1	17	108	1	4	7	3	80	3	13
Georgia .....	—	—	—	7	44	5	13	—	—	7	—	4
Florida .....	—	—	27	111	451	2	9	22	117	634	12	269
EAST SOUTH CENTRAL .....	—	1	14	131	321	5	21	27	198	1,441	51	329
Kentucky .....	—	—	11	43	141	2	6	6	133	460	27	156
Tennessee .....	—	—	3	65	41	2	10	12	53	451	22	144
Alabama .....	—	1	—	—	83	—	2	6	5	175	—	18
Mississippi .....	—	—	—	23	56	1	3	3	7	355	2	11
WEST SOUTH CENTRAL .....	—	5	34	256	421	6	49	49	160	1,385	151	528
Arkansas .....	—	—	—	4	6	—	4	6	9	49	52	60
Louisiana .....	—	1	8	23	19	4	8	16	6	22	12	25
Oklahoma .....	—	—	—	6	2	1	4	2	21	103	1	26
Texas .....	—	4	26	223	394	1	33	25	124	1,211	86	417
MOUNTAIN .....	—	2	46	224	550	2	11	6	53	981	79	423
Montana .....	—	1	1	2	11	1	2	—	12	85	7	16
Idaho .....	—	—	29	88	3	1	1	2	10	61	2	6
Wyoming .....	—	—	—	5	—	—	—	1	1	234	—	—
Colorado .....	—	—	10	49	236	—	2	—	12	81	54	251
New Mexico .....	—	1	6	71	45	—	1	1	18	331	14	81
Arizona *	—	—	—	8	149	—	2	1	—	150	—	17
Utah .....	—	—	—	1	106	—	1	1	—	37	1	50
Nevada .....	—	—	—	—	—	—	2	—	—	2	1	2
PACIFIC .....	3	9	61	572	1,097	1	65	73	416	3,161	205	996
Washington .....	—	—	18	264	276	—	3	8	59	378	16	134
Oregon .....	—	—	22	145	9	—	4	5	46	678	15	134
California .....	1	7	20	158	772	1	57	59	241	1,814	173	721
Alaska .....	1	1	—	—	5	—	1	—	60	244	—	—
Hawaii .....	1	1	1	5	35	—	—	1	10	47	1	7
Guam .....	—	—	—	2	—	—	—	3	—	1	—	1
Puerto Rico .....	—	—	63	419	105	—	1	—	22	187	—	13
Virgin Islands .....	—	—	—	—	—	—	—	2	—	3	1	1

\*Delayed reports: Measles: N.H. 4, D.C. delete 1

Meningococcal infections: N. Dak. 1

Mumps: Me. 3, N.H. 34, Ariz. 31

Rubella: Ariz. 3

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MARCH 10, 1973 AND MARCH 11, 1972 (10th WEEK) – Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS			
		Cumulative 1973	1973		Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
											1973	1973		
UNITED STATES . . . . .	10	584	5,462	15	11	49	1	6	13,119	489	56	562		
NEW ENGLAND . . . . .	—	14	180	—	—	3	—	—	396	16	4	35		
Maine *	—	1	11	—	—	—	—	—	25	1	4	28		
New Hampshire *	—	—	4	—	—	—	—	—	17	1	—	6		
Vermont . . . . .	—	—	3	—	—	—	—	—	3	3	—	—		
Massachusetts . . . . .	—	4	110	—	—	3	—	—	137	4	—	1		
Rhode Island . . . . .	—	1	10	—	—	—	—	—	52	1	—	—		
Connecticut . . . . .	—	8	42	—	—	—	—	—	162	6	—	—		
MIDDLE ATLANTIC . . . . .	3	101	1,117	—	1	6	—	1	1,939	135	—	4		
Upstate New York . . . . .	—	16	237	—	—	—	—	—	611	2	—	1		
New York City . . . . .	1	32	359	—	1	6	—	—	791	92	—	—		
New Jersey . . . . .	2	17	223	—	—	—	—	—	119	23	—	—		
Pennsylvania . . . . .	—	36	298	—	—	—	—	1	418	18	—	3		
EAST NORTH CENTRAL . . . . .	1	93	869	1	1	5	—	—	1,548	24	7	46		
Ohio . . . . .	—	24	329	1	1	3	—	—	450	11	—	9		
Indiana . . . . .	—	4	122	—	—	—	—	—	170	5	1	7		
Illinois . . . . .	—	31	243	—	—	1	—	—	170	2	4	15		
Michigan . . . . .	—	22	141	—	—	1	—	—	534	6	—	—		
Wisconsin . . . . .	1	12	34	—	—	—	—	—	224	—	2	15		
WEST NORTH CENTRAL . . . . .	3	15	195	2	3	4	—	1	781	4	8	156		
Minnesota . . . . .	—	4	19	—	—	—	—	—	88	3	4	56		
Iowa . . . . .	—	—	26	—	—	—	—	—	221	—	3	52		
Missouri . . . . .	3	7	95	2	2	2	—	1	220	1	—	14		
North Dakota . . . . .	—	—	5	—	—	—	—	—	9	—	—	29		
South Dakota . . . . .	—	2	14	—	—	1	—	—	28	—	—	3		
Nebraska . . . . .	—	—	11	—	1	1	—	—	60	—	—	—		
Kansas . . . . .	—	2	25	—	—	—	—	—	155	—	1	2		
SOUTH ATLANTIC . . . . .	2	113	1,084	4	2	8	—	1	3,328	139	5	55		
Delaware . . . . .	—	—	11	—	—	—	—	1	73	2	—	—		
Maryland . . . . .	—	—	96	—	—	—	—	—	—	—	—	—		
District of Columbia . . . . .	—	8	58	—	—	—	—	—	—	—	—	2		
Virginia . . . . .	—	19	138	1	—	—	—	—	359	16	—	—		
West Virginia . . . . .	—	14	68	—	—	—	—	—	322	31	3	23		
North Carolina *	—	19	188	1	—	1	—	—	42	1	—	8		
South Carolina . . . . .	—	12	112	—	—	1	—	—	307	8	—	—		
Georgia . . . . .	—	18	172	2	—	1	—	—	321	24	—	—		
Florida . . . . .	2	23	241	—	2	5	—	—	745	18	1	14		
									1,159	39	1	8		
EAST SOUTH CENTRAL . . . . .	1	50	468	4	1	2	1	3	1,154	21	18	136		
Kentucky . . . . .	—	19	122	1	1	1	—	—	189	2	10	56		
Tennessee . . . . .	—	14	140	3	—	—	—	1	472	9	8	58		
Alabama . . . . .	1	7	130	—	—	1	1	2	363	1	—	22		
Mississippi . . . . .	—	10	76	—	—	—	—	—	130	9	—	—		
WEST SOUTH CENTRAL . . . . .	—	78	547	4	—	2	—	—	1,771	56	11	83		
Arkansas *	—	6	64	1	—	—	—	—	195	5	—	19		
Louisiana *	—	7	110	—	—	—	—	—	324	7	2	7		
Oklahoma . . . . .	—	7	46	2	—	1	—	—	297	11	3	20		
Texas . . . . .	—	58	327	1	—	1	—	—	955	33	6	37		
MOUNTAIN . . . . .	—	27	122	—	—	2	—	—	450	18	—	6		
Montana . . . . .	—	1	5	—	—	—	—	—	33	—	—	—		
Idaho . . . . .	—	—	10	—	—	—	—	—	18	1	—	—		
Wyoming . . . . .	—	—	6	—	—	—	—	—	16	1	—	—		
Colorado . . . . .	—	4	19	—	—	—	—	—	117	6	—	—		
New Mexico . . . . .	—	5	40	—	—	1	—	—	62	5	—	—		
Arizona *	—	16	29	—	—	1	—	—	94	3	—	6		
Utah . . . . .	—	—	6	—	—	—	—	—	35	1	—	—		
Nevada . . . . .	—	1	7	—	—	—	—	—	75	1	—	—		
PACIFIC . . . . .	—	93	880	—	3	17	—	—	1,752	76	3	41		
Washington . . . . .	—	14	79	—	—	—	—	—	164	2	—	—		
Oregon . . . . .	—	3	41	—	—	1	—	—	147	—	—	—		
California . . . . .	—	71	686	—	3	16	—	—	1,309	71	3	39		
Alaska . . . . .	—	—	25	—	—	—	—	—	73	2	—	2		
Hawaii . . . . .	—	5	49	—	—	—	—	—	59	1	—	—		
Guam *	—	—	4	—	—	—	—	—	—	—	—	—		
Puerto Rico . . . . .	3	12	110	—	—	—	—	—	57	10	—	6		
Virgin Islands . . . . .	—	—	—	—	—	—	—	—	3	—	—	—		
*Delayed reports: TB: N.C. delete 2 (1972) & 1 (1973)														

\*Delayed reports: TB: N.C. delete 3 (1973) delete 1 (1972), Guam 1  
Gonorrhea: Ark. 554, La. delete 3, Ariz. 61, Guam 2  
Syphilis: Me. 2, N.H. 1, Ark. 3, Ariz. 1

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING MARCH 10, 1973

Week No.

10

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
<b>NEW ENGLAND</b>	653	427	19	39	<b>SOUTH ATLANTIC</b>	1,428	782	84	73
Boston, Mass.	199	127	8	7	Atlanta, Ga.	154	75	2	5
Bridgeport, Conn.	35	22	3	3	Baltimore, Md.	246	151	9	6
Cambridge, Mass.	24	21	—	8	Charlotte, N. C.	70	38	3	—
Fall River, Mass.	26	19	—	—	Jacksonville, Fla.	118	55	3	2
Hartford, Conn.	41	27	—	—	Miami, Fla.	129	72	3	6
Lowell, Mass.	18	13	—	1	Norfolk, Va.	71	44	2	8
Lynn, Mass.	15	12	—	3	Richmond, Va.	105	53	3	11
New Bedford, Mass.	31	22	—	1	Savannah, Ga.	34	17	—	3
New Haven, Conn.	60	34	1	3	St. Petersburg, Fla.	130	106	1	5
Providence, R. I.	65	42	4	8	Tampa, Fla.	110	72	2	17
Somerville, Mass.	9	5	—	1	Washington, D. C.	211	80	56	7
Springfield, Mass.	52	26	1	1	Wilmington, Del.	50	19	—	3
Waterbury, Conn.	33	27	—	—					
Worcester, Mass.	45	30	2	3	<b>EAST SOUTH CENTRAL</b>	803	429	37	51
<b>MIDDLE ATLANTIC</b>	3,156	1,908	112	145	Birmingham, Ala.	152	74	7	5
Albany, N. Y.	67	37	6	3	Chattanooga, Tenn.	72	34	3	6
Allentown, Pa.	27	19	—	2	Knoxville, Tenn.	41	23	1	2
Buffalo, N. Y.	155	94	4	15	Louisville, Ky.	116	65	4	7
Camden, N. J.	44	26	—	2	Memphis, Tenn.	205	110	11	5
Elizabeth, N. J.	29	22	1	—	Mobile, Ala.	48	30	1	4
Erie, Pa.	36	24	3	2	Montgomery, Ala.	50	28	3	9
Jersey City, N. J.	60	33	3	6	Nashville, Tenn.	119	65	7	13
Newark, N. J.	67	38	4	3	<b>WEST SOUTH CENTRAL</b>	1,361	794	66	64
New York City, N. Y. †	1,456	854	55	69	Austin, Tex.	45	32	1	5
Paterson, N. J.	50	25	2	6	Baton Rouge, La.	36	23	—	3
Philadelphia, Pa.	595	355	16	8	Corpus Christi, Tex.	43	23	—	—
Pittsburgh, Pa.	166	99	7	6	Dallas, Tex.	189	108	8	4
Reading, Pa.	33	29	—	5	El Paso, Tex.	74	50	7	6
Rochester, N. Y.	115	81	3	5	Fort Worth, Tex.	88	53	3	5
Schenectady, N. Y.	20	12	2	2	Houston, Tex.	282	126	19	9
Scranton, Pa.	42	31	1	4	Little Rock, Ark.	45	29	3	6
Syracuse, N. Y.	84	59	1	3	New Orleans, La.	161	95	6	3
Trenton, N. J.	44	30	2	—	Oklahoma City, Okla. *	95	60	5	3
Utica, N. Y.	27	14	1	2	San Antonio, Tex.	138	86	7	4
Yonkers, N. Y.	39	26	1	2	Shreveport, La.	77	49	5	7
<b>EAST NORTH CENTRAL</b>	2,716	1,564	112	112	Tulsa, Okla.	88	60	2	9
Akron, Ohio	76	37	6	—	<b>MOUNTAIN</b>	601	366	23	38
Canton, Ohio	47	31	4	1	Albuquerque, N. Mex.	56	33	1	8
Chicago, Ill.	716	385	35	23	Colorado Springs, Colo.	34	23	2	6
Cincinnati, Ohio	168	105	5	6	Denver, Colo.	136	80	3	12
Cleveland, Ohio	228	130	8	5	Las Vegas, Nev.	26	8	1	1
Columbus, Ohio	135	71	7	7	Ogden, Utah	22	16	1	4
Dayton, Ohio	104	61	1	5	Phoenix, Ariz.	143	90	7	3
Detroit, Mich.	372	213	10	11	Pueblo, Colo.	20	16	1	2
Evansville, Ind.	39	26	—	3	Salt Lake City, Utah	82	52	3	—
Fort Wayne, Ind.	52	37	—	5	Tucson, Ariz.	82	48	4	2
Gary, Ind.	20	9	1	3	<b>PACIFIC</b>	1,689	1,056	53	52
Grand Rapids, Mich.	69	43	4	6	Berkeley, Calif.	26	18	—	—
Indianapolis, Ind.	178	94	10	5	Fresno, Calif.	57	36	1	2
Madison, Wis.	41	25	3	3	Glendale, Calif.	22	14	—	—
Milwaukee, Wis.	146	99	6	7	Honolulu, Hawaii	60	38	3	2
Peoria, Ill.	52	28	4	3	Long Beach, Calif.	108	66	4	1
Rockford, Ill.	46	30	3	4	Los Angeles, Calif.	540	341	17	16
South Bend, Ind.	52	29	—	6	Oakland, Calif.	80	47	3	—
Toledo, Ohio	106	70	3	8	Pasadena, Calif.	31	19	2	1
Youngstown, Ohio	69	41	2	1	Portland, Oreg.	147	91	5	3
<b>WEST NORTH CENTRAL</b>	810	541	25	45	Sacramento, Calif.	59	36	6	3
Des Moines, Iowa	62	46	1	2	San Diego, Calif.	115	73	3	2
Duluth, Minn.	26	17	—	5	San Francisco, Calif.	178	113	4	5
Kansas City, Kans.	47	24	2	9	San Jose, Calif.	61	38	1	2
Kansas City, Mo.	133	91	5	2	Seattle, Wash.	126	77	3	5
Lincoln, Nebr.	21	17	—	—	Spokane, Wash.	41	26	1	5
Minneapolis, Minn.	87	58	—	6	Tacoma, Wash.	38	23	—	5
Omaha, Nebr.	95	55	4	1					
St. Louis, Mo.	190	123	10	11	<b>Total</b>	13,217	7,867	531	619
St. Paul, Minn.	65	52	1	1	<b>Expected Number</b>	13,382	7,829	543	571
Wichita, Kans.	84	58	2	8	<b>Cumulative Total (includes reported corrections for previous weeks)</b>	143,753	86,496	5,123	8,024

†Delayed report for week ending March 3, 1973

\*Estimate based on average percent of divisional total

## BOTULISM — Continued

and mushrooms and brown gravy in 10 1/2-oz cans. These 4 products were distributed to consignees nationwide under various labels, including Fame, Deerwood, Sentry, Dipaolo, Niehaus, NAAS, and Fred's. These cans should be returned to the store where they were purchased. The recall did not involve mushrooms produced at the company's other plants, including mushrooms packed in glass or any sizes of button or whole mushrooms.

(Reported by the Field Investigations Branch, Office of the Associate Commissioner for Compliance, Food and Drug Administration; and the Bacterial Diseases Branch, Epidemiology Program, CDC.)

## Editorial Note

This is the 2nd commercial mushroom product shown to contain botulinal contamination in the past month. No cases of botulism have been reported to CDC as a result of the contamination of either product. The only reported outbreak

of illness from commercial mushrooms occurred in 1941 when 3 cases were reported and type E botulinal toxin was identified (1).

## Reference

I. Meyer KF, Eddie B: 65 Years of Human Botulism in the United States and Canada. San Francisco, University of California Printing Department, 1965, p. 15

## Errata

Vol. 22, No. 9, p. 77

In the article, "Typhoid Fever — Florida," correct the 1st sentence in paragraph 2 to read: "... the diagnosis of typhoid fever has been confirmed by culture in 63 of these and by 4-fold or greater rises in antibody titers to group D salmonella O antigens."

Vol. 22, No. 9, p. 78

In Figure 1, "45 Confirmed Typhoid Fever Cases, By Date of Onset, Homestead, Florida — Jan. 14-Feb. 28, 1973," delete the case occurring January 27-28.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to:

Center for Disease Control  
Attn: Editor  
Morbidity and Mortality Weekly Report  
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PUBLIC HEALTH SERVICE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

CENTER FOR DISEASE CONTROL

ATLANTA, GEORGIA 30333

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Morbidity and Mortality



Vol. 22, No. 11  
WEEKLY  
REPORT  
For  
Week Ending  
March 17, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION  
DATE OF RELEASE: MARCH 23, 1973 - ATLANTA, GEORGIA 30333

CURRENT TRENDS

NEUROPATHOLOGY IN NEWBORN INFANTS BATHED WITH HEXACHLOROPHENE - Washington

Pathologic specimens from all children under 5 years autopsied since 1966 have recently been studied by investigators at the University of Washington. This review revealed a total of 21 infants with a similar specific vacuolar lesion of the brainstem, including the reticular formation. A statistically significant association was demonstrated between the vacuolation of the reticular formation (VRF) and 3 or more 3% hexachlorophene (HCP) exposures.

Autopsy specimens came from university-affiliated hospitals that differed in the composition of their pediatric populations and in their bathing practices. Where 3% HCP was employed, rinsing followed its application. Clinical records on all infants studied were searched for basic demographic data and for the number of HCP baths, which were routinely charted.

CONTENTS

Current Trends  
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Epidemiologic Notes and Reports  
Septicemias Associated with Contaminated Intravenous Fluids - Wisconsin, Ohio . . . . . 99

The attack rate of VRF among autopsied babies in the study population exposed 3 or more times to 3% HCP in daily baths was 63% (19/30) (Table 1). Among those exposed to 3% HCP fewer than 3 times or exposed only to 100-fold dilutions of 3% HCP, the attack rate was lower than 1% (2/220); 1 of the cases in this latter group had no documented HCP bath. Eighteen of the 21 cases occurred in premature infants weighing under 1,400 gm at birth.

Important subgroups of the study population are compared in Table 2. Infants weighing 1,400 gm or less at birth who spent more than 3 days of neonatal life in the nursery

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	11th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 11 WEEKS		
	March 17, 1973	March 18, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis . . . . .	32	25	29	392	376	318
Brucellosis . . . . .	1	4	4	18	20	20
Chickenpox . . . . .	6,778	4,631	— — —	57,659	40,923	— — —
Diphtheria . . . . .	3	—	1	52	25	29
Encephalitis, primary:						
Arthropod-borne and unspecified . . . . .	18	9	19	182	160	211
Encephalitis, post-infectious . . . . .	6	3	7	41	48	63
Hepatitis, serum (Hepatitis B) . . . . .	160	200	138	1,482	2,072	1,358
Hepatitis, infectious (Hepatitis A) . . . . .	1,012	1,204	1,147	10,537	12,130	11,908
Malaria . . . . .	9	32	51	45	352	493
Measles (rubeola) . . . . .	785	972	972	7,288	7,953	7,949
Meningococcal infections, total . . . . .	43	40	83	362	394	769
Civilian . . . . .	42	36	67	350	378	707
Military . . . . .	1	4	7	12	16	62
Mumps . . . . .	2,236	2,292	3,034	20,680	23,271	28,363
Rubella (German measles) . . . . .	886	1,088	1,871	6,513	6,774	10,602
Tetanus . . . . .	—	2	2	10	16	16
Tuberculosis, new active . . . . .	648	729	— — —	6,115	6,371	— — —
Tularemia . . . . .	—	3	1	15	25	23
Typhoid fever . . . . .	5	5	6	54	53	49
Typhus, tick-borne (Rky. Mt. spotted fever) . . . . .	—	1	—	6	11	3
Venereal Diseases:						
Gonorrhea . . . . .	15,395	11,921	— — —	158,138	140,425	— — —
Syphilis, primary and secondary . . . . .	508	428	— — —	5,707	4,709	— — —
Rabies in animals . . . . .	68	112	86	631	817	796

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax: . . . . .	1	Poliomyelitis, total: *	—
Botulism: . . . . .	—	Paralytic: *	—
Congenital rubella syndrome: *	7	Psittacosis: *	3
Leprosy: Calif. — 1 . . . . .	24	Rabies in man: . . . . .	—
Leptospirosis: . . . . .	9	Trichinosis: . . . . .	18
Plague: . . . . .	—	Typhus, murine: . . . . .	4

\*Delayed reports: Congenital rubella syndrome: (1972) Colo. 1  
Poliomyelitis, paralytic: (1972) Mich. 1  
Psittacosis: (1972) Colo. 1

## NEUROPATHOLOGY – Continued

Table 1  
Proportion of Children Under 5 Years with Reticular Formation  
Lesion in University of Washington Hospitals

	Neonates ≤1,400 gm at Birth	Neonates >1,400 gm at Birth	Infants >2,500 gm at Birth Surviving More Than 1 Month
Fewer than 3 baths in 3% HCP or only 0.03% HCP baths	2/72	0/84	0/64
3 or more 3% HCP baths	16/16	3/13	0/1

Table 2  
Proportion of Infants with Reticular Formation Lesion Spending More  
Than 3 Days of Neonatal Life in University of Washington Nurseries

Birth Weight†	No Bath	1 or 2 Baths	3 or More Baths
≤1,400 gm	1/9	1/4	16/16
>1,400 gm	0/23	0/7	3/11

were at highest risk; the attack rate of VRF among infants in this subgroup given 3 or more 3% HCP baths was 100% (16/16). Among infants with 1 of 2 exposures, the attack rate was 25% (1/4), and among those with no documented HCP exposure, the attack rate was 11% (1/9). Thus, for neonates weighing 1,400 gm or less at birth, there is a statistically significant correlation between 3 or more exposures to 3% HCP and the presence of the lesion ( $p<.0005$ ); however, the population size was insufficient to allow firm comparisons of the frequency of the lesion following 1 or 2 documented exposures to 3% HCP with the frequency in the absence of HCP exposure.

The same analysis can be made for infants weighing more than 1,400 gm at birth who spent more than 3 days of neonatal life in the nursery. The attack rate of VRF among those bathed 3 or more times in 3% HCP was 27% (3/11), considerably lower than that for infants of 1,400 gm or less with similar exposure. However, this rate is still higher than that for infants weighing more than 1,400 gm who had fewer than 3 HCP baths and among whom no lesion was seen ( $p<.02$ ).

The clinical and extra-neural pathologic findings in the 29 neonates weighing 1,400 gm or less and surviving more than 3 days were also reviewed (Table 2). In 6 of the 18 with the lesion (16 with 3 or more baths and 2 with fewer than 3) fatal diseases or complications could obviously account for death. In contrast, each of the remaining 11 without the lesion showed an obvious cause of death. No specific clinical signs and symptoms have yet been correlated with these neuropathologic lesions.

Another group of 27 infants showed a different, non-specific vacuolation in certain heavily myelinated long tracts but not in the reticular formation. No correlation was established between this nonspecific vacuolation and HCP exposure, and no explanation of this type of lesion has been found.

(Reported by Robert M. Shuman, M.D., Richard W. Leech, M.D., and Ellsworth C. Alvord, Jr., M.D., Department of Pathology, University of Washington School of Medicine, Seattle; and an EIS Officer.)

## Editorial Note

Intensive or extensive exposure to HCP is known to produce neuropathologic changes consisting of spongy vacuolation in myelinated regions of animal brainstem and cerebellar tissue (1). Previously, there has been relatively little evidence of human HCP toxicity, considering its widespread use (2). A recent epidemic of toxic encephalopathy among infants in France was attributed to accidental incorporation of excessive amounts of HCP in a popular baby talcum powder (3). However, until now, no study in human infants with intact skin has demonstrated any significant clinical or neuropathologic abnormalities as a result of exposure to 3% HCP or lower concentrations as routinely applied in hospital nurseries.

The study results reported here raise concern over the use of HCP for infant bathing. An anatomic abnormality has been associated with 3 or more daily baths in 3% HCP, primarily in infants who weighed 1,400 gm or less at birth and who lived in the nursery environment for more than 3 days. Infants receiving fewer than 3 baths with 3% HCP, and infants bathed in a 100-fold dilution of 3% HCP may be at lower risk; no study infant weighing more than 1,400 gm who was bathed fewer than 3 times in 3% HCP or bathed in a 100-fold dilution of 3% HCP demonstrated the lesion.

The clinical correlates of these pathologic findings have not been established. Manifestations of severe prematurity and the many factors involved in neonatal intensive care have not been assessed for their association with the lesions; conversely, 1 infant with the lesion had no known exposure to HCP. The study does not permit inference of the true attack rates from the autopsy population to all infants. It is possible that the neuropathology may be self-limiting or reversible following withdrawal of HCP.

Some hospital nurseries have experienced an increased risk of staphylococcal disease on cessation of infant bathing with HCP (4). In the absence of infection, prophylactic bathing with HCP is not recommended; emphasis should be placed on the basic recommended practices for control of neonatal infections (4): 1) reliable surveillance of neonatal disease, 2) prompt isolation and treatment of disease, 3) adequate handwashing with an antibacterial agent such as HCP or an iodophor, 4) avoidance of crowding, and 5) use of infant cohorting. However, when the best possible practice has been inadequate for infection control, an antibacterial bathing regimen using HCP may be temporarily indicated (4). The urgency of such a regimen will vary in time and place according to the incidence and severity of staphylococcal infection.

The Food and Drug Administration has directed that hospitals confine HCP to prescription use (including handwashing with preparations containing HCP, which must be covered by a physician's order for any hospital department) (3). In light of the information from the University of Washington and until further data are developed, it is recommended that the use of HCP be restricted to personnel handwashing and to the temporary bathing of infants weighing more than 2,500 gm with 2 daily in-hospital applications (1st 2 days) of 3% HCP on normal skin, followed by careful rinsing.

## References

1. Kimbrough RD, Gaines TB: Hexachlorophene effects on the rat brain. *Arch Environ Health* 23:114-118, 1971
2. Kimbrough RD: Review of the toxicity of hexachlorophene. *Arch Environ Health* 23:119-122, 1971
3. *Federal Register*, Vol. 37, No. 188, pp. 20160-20164, 1972
4. *Morbidity and Mortality Weekly Report*, Vol. 21, No. 30, p. 253-255, 1972

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MARCH 17, 1973 AND MARCH 18, 1972 (11th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES .....	32	1	6,778	3	52	18	9	6	160	1,012	1,204
NEW ENGLAND .....	—	—	736	—	2	2	1	2	5	65	58
Maine *	—	—	8	—	—	—	—	—	—	—	7
New Hampshire .....	—	—	17	—	—	—	—	—	—	9	1
Vermont .....	—	—	12	—	—	—	—	—	1	6	4
Massachusetts .....	—	—	390	—	—	2	1	—	—	33	22
Rhode Island .....	—	—	58	—	2	—	—	—	2	6	9
Connecticut .....	—	—	251	—	—	—	—	2	2	11	14
MIDDLE ATLANTIC .....	10	—	357	—	—	2	2	—	45	173	246
Upstate New York .....	3	—	8	—	—	1	1	—	16	54	83
New York City .....	5	—	163	—	—	—	—	—	7	17	41
New Jersey .....	2	—	NN	—	—	—	1	—	12	55	63
Pennsylvania .....	—	—	186	—	—	1	—	—	10	47	59
EAST NORTH CENTRAL .....	3	—	2,526	—	—	4	2	2	15	150	210
Ohio .....	—	—	364	—	—	2	2	—	3	23	44
Indiana *	—	—	330	—	—	1	—	—	2	13	5
Illinois .....	—	—	—	—	—	—	—	—	1	40	62
Michigan .....	3	—	706	—	—	1	—	2	9	68	86
Wisconsin .....	—	—	1,126	—	—	—	—	—	—	6	13
WEST NORTH CENTRAL .....	1	—	1,086	—	4	2	—	—	5	39	39
Minnesota .....	1	—	14	—	—	1	—	—	2	4	3
Iowa .....	—	—	924	—	—	—	—	—	—	4	5
Missouri .....	—	—	46	—	—	—	—	—	1	18	9
North Dakota .....	—	—	27	—	—	—	—	—	—	1	2
South Dakota .....	—	—	5	—	4	—	—	—	—	5	10
Nebraska .....	—	—	24	—	—	1	—	—	—	1	2
Kansas .....	—	—	46	—	—	—	—	—	2	6	8
SOUTH ATLANTIC .....	6	1	459	—	—	7	1	—	18	142	172
Delaware .....	—	—	16	—	—	—	—	—	—	1	1
Maryland *	—	—	39	—	—	1	—	—	3	16	24
District of Columbia .....	—	—	6	—	—	—	—	—	—	4	2
Virginia .....	—	1	53	—	—	4	—	—	3	4	20
West Virginia .....	—	—	293	—	—	—	—	—	1	21	13
North Carolina .....	2	—	NN	—	—	1	1	—	4	22	35
South Carolina .....	—	—	52	—	—	—	—	—	1	16	5
Georgia .....	—	—	—	—	—	—	—	—	—	13	18
Florida .....	4	—	—	—	—	1	—	—	6	45	54
EAST SOUTH CENTRAL .....	—	—	257	—	—	—	—	—	3	67	60
Kentucky .....	—	—	202	—	—	—	—	—	—	21	15
Tennessee .....	—	—	NN	—	—	—	—	—	2	41	35
Alabama .....	—	—	24	—	—	—	—	—	—	—	9
Mississippi .....	—	—	31	—	—	—	—	—	1	5	1
WEST SOUTH CENTRAL .....	5	—	738	—	1	1	—	1	15	119	152
Arkansas *	—	—	5	—	—	—	—	—	—	6	6
Louisiana *	2	—	NN	—	—	—	—	—	5	12	7
Oklahoma .....	—	—	93	—	—	—	—	1	2	28	17
Texas .....	3	—	640	—	1	1	—	—	8	73	122
MOUNTAIN .....	—	—	114	1	1	—	—	—	3	55	55
Montana .....	—	—	19	—	—	—	—	—	1	4	10
Idaho .....	—	—	—	—	—	—	—	—	—	3	2
Wyoming .....	—	—	30	—	—	—	—	—	—	—	—
Colorado *	—	—	31	—	—	—	—	—	1	14	8
New Mexico .....	—	—	22	1	1	—	—	—	—	30	2
Arizona *	—	—	—	—	—	—	—	—	1	2	24
Utah .....	—	—	8	—	—	—	—	—	—	1	9
Nevada .....	—	—	4	—	—	—	—	—	—	1	—
PACIFIC .....	7	—	505	2	44	—	3	1	51	202	212
Washington .....	1	—	453	1	41	—	1	—	2	22	19
Oregon .....	—	—	1	—	1	—	—	—	3	26	30
California .....	6	—	—	1	2	—	2	1	46	148	157
Alaska .....	—	—	17	—	—	—	—	—	—	—	4
Hawaii .....	—	—	34	—	—	—	—	—	—	6	2
Guam .....	—	—	—	—	—	—	—	—	—	—	—
Puerto Rico .....	—	—	3	—	—	—	—	—	1	11	30
Virgin Islands .....	—	—	—	—	—	—	—	—	—	—	—

\*Delayed reports: Brucellosis: (1972) Colo. 1

Chickenpox: Me. 74, Md. 36, Ark: 9

Encephalitis, primary: La. delete 1, (1972) Colo. 2

Hepatitis B: Me. 1, Md. 2, Ark. 1, Ariz. 3

Hepatitis A: Me. 5, Ind. delete 2, Md. 23, Ark. 7, La. delete 3, Ariz. 14

## Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MARCH 17, 1973 AND MARCH 18, 1972 (11th WEEK) - Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	9	45	785	7,288	7,953	43	362	394	2,236	20,680	886	6,513
NEW ENGLAND .....	-	4	270	2,919	499	3	19	16	131	887	79	639
Maine *	-	-	-	10	79	-	-	2	1	30	3	25
New Hampshire .....	-	-	15	503	24	1	2	-	9	88	2	7
Vermont .....	-	2	2	59	56	-	2	-	53	141	-	6
Massachusetts .....	-	-	156	1,417	64	1	7	7	39	348	49	335
Rhode Island .....	-	-	16	234	90	-	1	6	5	80	3	42
Connecticut .....	-	2	81	696	186	1	7	1	24	200	22	224
MIDDLE ATLANTIC .....	-	6	61	570	457	10	52	42	231	2,019	139	788
Upstate New York .....	-	3	23	138	38	4	15	11	NN	NN	5	49
New York City .....	-	1	29	323	83	3	13	10	105	1,230	13	74
New Jersey .....	-	1	-	58	320	2	11	11	54	420	62	558
Pennsylvania .....	-	1	9	51	16	1	13	10	72	369	59	107
EAST NORTH CENTRAL .....	1	5	247	2,039	3,100	6	34	52	608	5,686	254	1,540
Ohio .....	1	1	14	97	90	5	21	18	83	743	8	126
Indiana .....	-	1	24	200	608	-	1	8	39	476	28	337
Illinois .....	-	2	38	585	996	-	3	12	150	1,111	23	176
Michigan *	-	1	121	767	534	1	9	12	107	1,493	134	452
Wisconsin .....	-	-	50	390	872	-	-	2	229	1,863	61	449
WEST NORTH CENTRAL .....	1	1	26	195	330	2	31	34	291	2,114	39	506
Minnesota .....	-	-	1	13	11	-	-	7	3	43	8	70
Iowa .....	-	-	19	139	172	-	3	-	212	1,512	1	110
Missouri .....	-	-	1	11	103	2	16	6	6	255	26	194
North Dakota .....	1	1	2	21	26	-	3	-	2	29	-	30
South Dakota .....	-	-	-	-	4	-	2	2	-	6	-	2
Nebraska .....	-	-	-	1	6	-	3	6	12	50	4	79
Kansas .....	-	-	3	10	8	-	4	13	56	219	-	21
SOUTH ATLANTIC .....	1	6	41	241	732	8	65	82	273	2,302	89	478
Delaware .....	-	-	-	1	4	-	-	1	11	133	-	2
Maryland *	-	-	-	-	6	1	12	9	27	273	1	8
District of Columbia .....	-	-	-	-	-	-	1	2	3	11	-	1
Virginia .....	-	4	9	17	20	2	8	17	23	188	6	34
West Virginia .....	-	-	19	71	48	-	1	5	91	858	7	64
North Carolina .....	-	1	2	6	17	-	12	16	NN	NN	24	32
South Carolina .....	1	1	-	17	110	1	5	8	25	105	2	15
Georgia .....	-	-	1	8	46	1	14	-	-	7	-	4
Florida .....	-	-	10	121	481	3	12	24	93	727	49	318
EAST SOUTH CENTRAL .....	-	1	17	148	358	1	22	29	92	1,533	23	352
Kentucky .....	-	-	9	52	141	-	6	6	34	494	-	156
Tennessee .....	-	-	8	73	58	1	11	13	41	492	16	160
Alabama .....	-	1	-	-	83	-	2	7	11	186	6	24
Mississippi .....	-	-	-	23	76	-	3	3	6	361	1	12
WEST SOUTH CENTRAL .....	-	5	34	291	516	6	56	52	155	1,542	74	602
Arkansas *	-	-	-	5	6	1	6	6	6	57	1	61
Louisiana .....	-	1	4	27	21	-	8	16	10	32	2	27
Oklahoma .....	-	-	1	7	2	-	4	3	-	103	10	36
Texas .....	-	4	29	252	487	5	38	27	139	1,350	61	478
MOUNTAIN .....	2	4	17	241	634	-	11	6	95	1,076	67	490
Montana .....	-	1	-	2	12	-	2	-	4	89	32	48
Idaho .....	-	-	11	99	3	-	1	2	9	70	-	6
Wyoming .....	-	-	-	5	-	-	-	1	14	248	2	2
Colorado .....	-	-	6	55	267	-	2	-	2	83	18	269
New Mexico .....	-	1	-	71	47	-	1	1	55	386	12	93
Arizona .....	2	2	-	8	199	-	2	1	-	150	-	17
Utah .....	-	-	-	1	106	-	1	1	6	43	3	53
Nevada .....	-	-	-	-	-	-	2	-	5	7	-	2
PACIFIC .....	4	13	72	644	1,327	7	72	81	360	3,521	122	1,118
Washington .....	-	-	28	292	317	3	6	8	73	451	17	151
Oregon .....	1	1	14	159	10	-	4	5	55	733	17	151
California .....	3	10	30	188	955	4	61	67	184	1,998	88	809
Alaska .....	-	1	-	-	5	-	1	-	31	275	-	-
Hawaii .....	-	1	-	5	40	-	-	1	17	64	-	7
Guam .....	-	-	-	2	1	-	-	3	-	1	-	1
Puerto Rico .....	-	-	35	454	130	2	3	1	17	204	-	13
Virgin Islands .....	-	-	-	-	-	-	-	2	1	4	-	1

\*Delayed reports: Measles: Ark. 1, Mich. 140

Meningococcal infections: Md. 1, Ark. 1

Mumps: Me. 5, Ark. 2

Rubella: Me. 5, Md. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MARCH 17, 1973 AND MARCH 18, 1972 (11th WEEK) - Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES . . . . .	10	648	6,115	15	5	54	-	6	15,395	508	68	631
NEW ENGLAND . . . . .	-	18	198	-	-	3	-	-	472	11	5	40
Maine . . . . .	-	-	11	-	-	-	-	-	15	-	4	32
New Hampshire . . . . .	-	-	4	-	-	-	-	-	16	-	1	7
Vermont . . . . .	-	2	5	-	-	-	-	-	4	-	-	-
Massachusetts . . . . .	-	14	124	-	-	3	-	-	268	6	-	1
Rhode Island . . . . .	-	2	12	-	-	-	-	-	38	1	-	-
Connecticut . . . . .	-	-	42	-	-	-	-	-	131	4	-	-
MIDDLE ATLANTIC . . . . .	3	131	1,248	-	3	9	-	1	2,012	114	-	4
Upstate New York . . . . .	-	11	248	-	3	3	-	-	300	7	-	1
New York City . . . . .	1	61	420	-	-	6	-	-	956	68	-	-
New Jersey . . . . .	2	22	245	-	-	-	-	-	436	20	-	-
Pennsylvania . . . . .	-	37	335	-	-	-	-	1	320	19	-	3
EAST NORTH CENTRAL . . . . .	1	102	971	1	-	5	-	-	1,883	23	9	55
Ohio . . . . .	-	20	349	1	-	3	-	-	763	6	-	9
Indiana . . . . .	-	18	140	-	-	-	-	-	176	7	4	11
Illinois . . . . .	-	35	278	-	-	1	-	-	222	2	4	19
Michigan . . . . .	-	19	160	-	-	1	-	-	545	6	1	1
Wisconsin . . . . .	1	10	44	-	-	-	-	-	177	2	-	15
WEST NORTH CENTRAL . . . . .	3	26	221	2	-	4	-	1	914	9	12	168
Minnesota . . . . .	-	6	25	-	-	-	-	-	183	1	5	61
Iowa . . . . .	-	5	31	-	-	-	-	-	131	2	2	54
Missouri . . . . .	3	8	103	2	-	2	-	1	320	3	2	16
North Dakota . . . . .	-	2	7	-	-	-	-	-	17	1	-	29
South Dakota * . . . . .	-	-	14	-	-	1	-	-	22	-	-	3
Nebraska . . . . .	-	3	14	-	-	1	-	-	36	-	-	-
Kansas . . . . .	-	2	27	-	-	-	-	-	205	2	3	5
SOUTH ATLANTIC . . . . .	2	118	1,211	4	1	9	-	1	3,797	185	6	62
Delaware . . . . .	-	-	11	-	-	-	-	1	45	-	-	-
Maryland * . . . . .	-	12	117	-	-	-	-	-	414	6	-	3
District of Columbia . . . . .	-	8	66	-	-	-	-	-	335	13	-	-
Virginia . . . . .	-	28	166	1	-	-	-	-	340	69	4	27
West Virginia . . . . .	-	7	75	-	-	-	-	-	59	2	-	8
North Carolina . . . . .	-	18	206	1	1	2	-	-	543	17	-	-
South Carolina . . . . .	-	9	121	-	-	1	-	-	312	15	-	-
Georgia . . . . .	-	21	193	2	-	1	-	-	854	26	-	14
Florida . . . . .	2	15	256	-	-	5	-	-	895	37	2	10
EAST SOUTH CENTRAL . . . . .	1	75	543	4	-	2	-	3	1,445	32	23	159
Kentucky . . . . .	-	16	138	1	-	1	-	-	113	6	17	73
Tennessee . . . . .	-	14	154	3	-	-	-	1	401	12	4	62
Alabama . . . . .	1	23	153	-	-	1	-	2	579	6	2	24
Mississippi . . . . .	-	22	98	-	-	-	-	-	352	8	-	-
WEST SOUTH CENTRAL . . . . .	-	56	599	4	-	2	-	-	1,870	59	9	92
Arkansas * . . . . .	-	9	69	1	-	-	-	-	121	6	2	21
Louisiana * . . . . .	-	-	110	-	-	-	-	-	485	21	1	8
Oklahoma . . . . .	-	10	56	2	-	1	-	-	200	4	5	25
Texas . . . . .	-	37	364	1	-	1	-	-	1,064	28	1	38
MOUNTAIN . . . . .	-	25	147	-	-	2	-	-	703	16	-	6
Montana . . . . .	-	-	5	-	-	-	-	-	27	-	-	-
Idaho . . . . .	-	-	10	-	-	-	-	-	6	-	-	-
Wyoming . . . . .	-	1	7	-	-	-	-	-	3	-	-	-
Colorado . . . . .	-	3	22	-	-	-	-	-	240	4	-	-
New Mexico . . . . .	-	17	57	-	-	1	-	-	109	-	-	-
Arizona * . . . . .	-	3	32	-	-	1	-	-	206	2	-	6
Utah * . . . . .	-	1	7	-	-	-	-	-	32	1	-	-
Nevada . . . . .	-	-	7	-	-	-	-	-	80	9	-	-
PACIFIC . . . . .	-	97	977	-	1	18	-	-	2,299	59	4	45
Washington . . . . .	-	4	83	-	-	-	-	-	185	3	-	-
Oregon . . . . .	-	5	46	-	1	2	-	-	219	2	-	-
California . . . . .	-	84	770	-	-	16	-	-	1,825	53	4	43
Alaska . . . . .	-	-	25	-	-	-	-	-	52	-	-	2
Hawaii . . . . .	-	4	53	-	-	-	-	-	18	1	-	-
Guam . . . . .	-	-	4	-	-	-	-	-	-	-	-	-
Puerto Rico . . . . .	3	5	115	-	-	-	-	-	133	15	2	8
Virgin Islands . . . . .	-	-	-	-	-	-	-	-	8	2	-	-

\*Delayed reports: T.B.: Md. 9, Ark. delete 4, (1972) S. Dak. delete 2  
Gonorrhea: S. Dak. delete 2, Md. 283, La. delete 3,  
Ariz. 37, Utah 3

Syphilis: Md. 8, Ariz. 1  
Rabies: Md. 1

## Morbidity and Mortality Weekly Report

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING MARCH 17, 1973

Week No.

11

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	687	437	23	40	SOUTH ATLANTIC	1,330	710	49	67
Boston, Mass.	215	127	8	10	Atlanta, Ga.	164	74	10	8
Bridgeport, Conn.	39	27	1	4	Baltimore, Md.	241	128	6	6
Cambridge, Mass.	31	22	1	6	Charlotte, N. C.	62	36	5	—
Fall River, Mass.	24	18	1	—	Jacksonville, Fla.	95	54	4	4
Hartford, Conn.	74	42	5	—	Miami, Fla.	101	53	4	6
Lowell, Mass.	19	16	—	1	Norfolk, Va.	53	27	2	5
Lynn, Mass.	22	12	—	2	Richmond, Va.	100	45	3	9
New Bedford, Mass.	31	23	—	3	Savannah, Ga.	33	19	—	2
New Haven, Conn.	42	27	1	—	St. Petersburg, Fla.	116	86	5	4
Providence, R. I.	64	33	3	9	Tampa, Fla.	79	59	1	10
Somerville, Mass.	15	10	—	—	Washington, D. C.	236	110	9	10
Springfield, Mass.	36	24	—	1	Wilmington, Del.	50	19	—	3
Waterbury, Conn.	31	22	2	—	EAST SOUTH CENTRAL	764	405	58	40
Worcester, Mass.	44	34	1	4	Birmingham, Ala.	150	72	12	5
MIDDLE ATLANTIC	3,436	2,082	96	154	Chattanooga, Tenn.	63	32	7	2
Albany, N. Y.	45	24	—	1	Knoxville, Tenn.	34	25	1	—
Allentown, Pa.	24	18	—	3	Louisville, Ky.	105	55	9	13
Buffalo, N. Y.	140	72	6	11	Memphis, Tenn.	161	83	25	6
Camden, N. J.	43	28	1	3	Mobile, Ala.	74	39	1	4
Elizabeth, N. J.	37	25	—	2	Montgomery, Ala.	42	24	—	4
Erie, Pa.	35	29	2	3	Nashville, Tenn.	135	75	3	6
Jersey City, N. J.	81	43	4	3	WEST SOUTH CENTRAL	1,389	766	68	58
Newark, N. J.	92	42	6	6	Austin, Tex.	42	26	1	4
New York City, N. Y. †	1,768	1,116	30	71	Baton Rouge, La.	61	34	3	2
Paterson, N. J.	41	27	4	3	Corpus Christi, Tex.	36	24	3	1
Philadelphia, Pa.	496	299	18	9	Dallas, Tex.	191	99	6	3
Pittsburgh, Pa.	206	112	7	17	El Paso, Tex.	37	19	5	7
Reading, Pa.	43	28	—	4	Fort Worth, Tex.	105	63	4	4
Rochester, N. Y.	107	65	5	5	Houston, Tex.	267	141	7	7
Schenectady, N. Y.	33	17	—	2	Little Rock, Ark.	65	36	3	3
Scranton, Pa.	36	21	—	—	New Orleans, La.	173	90	14	4
Syracuse, N. Y.	91	45	9	2	Oklahoma City, Okla. *	97	57	5	3
Trenton, N. J.	38	18	3	2	San Antonio, Tex.	160	82	13	4
Utica, N. Y.	33	17	1	3	Shreveport, La.	73	46	3	11
Yonkers, N. Y.	47	36	—	4	Tulsa, Okla.	82	49	1	5
EAST NORTH CENTRAL	2,505	1,422	100	81	MOUNTAIN	567	341	17	29
Akron, Ohio	59	32	2	—	Albuquerque, N. Mex.	49	28	—	12
Canton, Ohio	26	16	—	1	Colorado Springs, Colo.	32	16	1	5
Chicago, Ill.	660	373	19	16	Denver, Colo.	133	87	4	1
Cincinnati, Ohio	156	96	6	2	Las Vegas, Nev.	17	8	—	—
Cleveland, Ohio	195	91	10	6	Ogden, Utah	17	9	1	3
Columbus, Ohio	135	71	9	2	Phoenix, Ariz.	142	85	4	—
Dayton, Ohio	135	69	1	3	Pueblo, Colo.	25	20	—	4
Detroit, Mich.	319	162	20	16	Salt Lake City, Utah	75	45	5	4
Evansville, Ind.	37	24	1	2	Tucson, Ariz.	77	43	2	—
Fort Wayne, Ind.	51	34	3	5	PACIFIC	1,803	1,141	73	58
Gary, Ind.	41	17	4	1	Berkeley, Calif.	13	9	—	—
Grand Rapids, Mich.	51	35	1	5	Fresno, Calif.	54	32	2	1
Indianapolis, Ind.	163	94	6	4	Glendale, Calif.	45	34	3	—
Madison, Wis.	33	15	3	4	Honolulu, Hawaii	53	29	7	—
Milwaukee, Wis.	161	108	6	4	Long Beach, Calif.	105	68	3	1
Peoria, Ill.	45	28	3	—	Los Angeles, Calif.	585	380	11	18
Rockford, Ill.	44	32	—	3	Oakland, Calif.	73	51	3	—
South Bend, Ind.	30	23	—	6	Pasadena, Calif.	53	38	1	1
Toledo, Ohio	102	62	4	1	Portland, Oreg.	139	95	5	7
Youngstown, Ohio	62	40	2	—	Sacramento, Calif.	66	45	—	3
WEST NORTH CENTRAL	776	491	26	37	San Diego, Calif.	126	71	11	3
Des Moines, Iowa	51	35	3	1	San Francisco, Calif.	172	97	10	5
Duluth, Minn.	20	15	—	1	San Jose, Calif.	52	22	—	2
Kansas City, Kans.	29	14	2	3	Seattle, Wash.	142	85	7	4
Kansas City, Mo.	149	100	4	2	Spokane, Wash.	74	49	6	8
Lincoln, Nebr.	17	12	—	1	Tacoma, Wash.	51	36	4	5
Minneapolis, Minn.	98	59	7	4	Total	13,257	7,795	510	564
Omaha, Nebr.	82	50	3	—	Expected Number	13,289	7,758	540	557
St. Louis, Mo.	201	116	6	19	Cumulative Total (includes reported corrections for previous weeks)	157,322	94,553	5,608	8,590
St. Paul, Minn.	63	45	—	2					
Wichita, Kans.	66	45	1	4					

†Delayed report for week ending March 10, 1973.

\*Estimate based on average percent of divisional total.

EPIDEMIOLOGIC NOTES AND REPORTS  
SEPTICEMIAS ASSOCIATED WITH CONTAMINATED INTRAVENOUS FLUIDS – Wisconsin, Ohio

On March 5, 1973, a hospital in Milwaukee, Wisconsin requested CDC's assistance in investigating 3 cases of septicemia felt to be related to the infusion of intrinsically contaminated intravenous products. *Citrobacter freundii* was recovered from the blood of 2 patients and *Enterobacter agglomerans* (formerly classified as *Erwinia*) and *E. cloacae* from the blood of 1 patient. Investigation revealed that all 3 patients developed septicemia within 3 hours after receiving infusions from 1,000 cc bottles of 5% Dextrose in Lactated Ringer's Injection, Cutter (D5LR). Clinical manifestations of septicemia included rapid onset of shaking chills, fever, nausea, headache, and shock. One patient recovered following discontinuation of the infusion and administration of antibiotics, 1 patient died, and the other remains critically ill. Clinical, microbiologic, and epidemiologic data strongly suggest that D5LR contaminated with *Enterobacter* and *Citrobacter* was responsible for these cases of septicemia.

In addition, in the past 2 weeks CDC has learned of 2 other instances of contaminated D5LR, 1 at another Wisconsin hospital and 1 in Ohio. In 1 case the patient developed septicemia following infusion of D5LR. Identification of the organisms isolated from the patient's blood and the fluid in use is pending.

On March 19, as a result of these investigations and the concern of CDC, Cutter Laboratories, Inc., recalled the following 1,000 cc bottles of D5LR produced at its Chattanooga plant: 1) product code 495-05, lot numbers TK1159, TK1426, TK3115, TK3248, and TK3263; 2) product code 423-30, lot number TK3497 and all higher numbers prefixed by TK. Lot numbers prefixed by the letters US are not involved in the recall. Only D5LR is being recalled since there is no indication that any other Cutter intravenous fluids are contaminated. The recalled D5LR was prepared using a modified process which included exposure of the bottles to increased pressure during autoclaving; other types of intravenous fluids manufactured by Cutter are produced by a different method.

(Reported by a Milwaukee hospital; George H. Handy, M.D., State Health Officer, Wisconsin Department of Health and Social Services; John H. Ackerman, M.D., State Epidemiologist, Ohio Department of Health; Microbiological Control Section, Hospital Infections Laboratory; the Bacteriology Section, Microbiology Branch, Laboratory Division, CDC; and 2 EIS Officers.)

Editorial Note

Septicemia caused by *C. freundii* or *E. agglomerans* is very rare. Alert physicians at the Milwaukee hospital realized that the occurrence of 3 cases of septicemia due to these organisms within a short period of time was an unusual event. Appropriate epidemiologic investigations were quickly initiated which led to the request for CDC assistance and the implication of contaminated intravenous fluid. It is possible that intravenous-associated septicemia has gone unrecognized in some hospitals because of the low incidence of disease. The scope of the problem has not yet been defined, but the prompt action of Cutter in recalling all D5LR produced using the modified process should terminate the problem.

Hospitals noting cases of septicemia possibly related to D5LR therapy should carefully record the lot numbers of involved bottles. Since the identification of *E. agglomerans*,

*E. cloacae*, and *C. freundii* may be difficult for some hospital laboratories, blood and intravenous fluid isolates should be saved for microbiologic confirmation. Table 3 should be of assistance in the identification of these organisms.

Table 3  
Identification Schema for *Citrobacter freundii* (variant), *Enterobacter agglomerans*, *Enterobacter cloacae*

	<i>Citrobacter freundii</i> (H <sub>2</sub> S and Nitrate negative variant)	<i>Enterobacter</i> <i>agglomerans</i>	<i>Enterobacter</i> <i>cloacae</i>
Gas from glucose	+	– or +	+
Glucose	+	+	+
Lactose	+	d	+
Sucrose	+	d	+
Mannitol	+	+	+
Salicin	(+)	d	+
Dulcitol	–	–	– or +
Maltose	+	d	+
Sorbitol	+	d	+
Raffinose	+	d	+
Adonitol	–	–	– or +
Methyl-Red	+	– or +	–
Voges-Proskauer	–	+ or –	+
Indole	–	– or +	–
Citrate	+	+ or –	+
Urea	–	– or (+)	+ or –
Motility	+	+ or –	+
Lysine decarboxylase	–	–	–
Arginine dihydrolase	+	–	+
Ornithine decarboxylase	–	–	+
Malonate	+	+ or –	+ or –
H <sub>2</sub> S (TSI)	–	–	–
Nitrate	–	+ or –	+
Gelatin	–	(+) or –	(+)
Oxidase	–	–	–
Yellow Pigment	–	+ or –	–

+, positive within 1-2 days incubation; (+), positive reaction after 3 or more days; –, negative reaction; + or –, majority are positive but occasional negative reaction; – or +, majority are negative but occasional positive reaction; d, different reactions.

This is the 2nd outbreak of septicemia associated with contaminated intravenous infusion products investigated by CDC. In 1971, a nationwide epidemic of *E. agglomerans* and *E. cloacae* septicemia was attributed to contaminated dextrose-containing infusion products of another manufacturer (1,2,3). In addition, an outbreak of septicemia due to dextrose-containing intravenous fluid contaminated with gram-negative bacteria, including *E. agglomerans*, occurred in England in 1972 (4).

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1. Center for Disease Control: Nosocomial bacteremias associated with intravenous fluid therapy – USA. Morbidity and Mortality Weekly Rep 20: Special Supplement to No. 9, March 1971  
2. Center for Disease Control: Follow-up on septicemias associated with contaminated Abbott intravenous solutions – United States. Morbidity and Mortality Weekly Rep 20(11):91-92, March 1971  
3. Center for Disease Control: Follow-up on septicemia associated with contaminated intravenous fluid from Abbott Laboratories. Morbidity and Mortality Weekly Rep 20(12):110, March 1971  
4. Report of the committee appointed to inquire into the circumstances, including the production, which led to the use of contaminated infusion fluids in the Devenport Section of Plymouth General Hospital. London, Her Majesty's Stationery Office, 1972

**Note to Readers:**

The format of the MMWR has been changed slightly to improve printing efficiency and for the convenience of our readers. Beginning with this issue, the statistical tables will appear on the 4 center pages of every issue, whether 8 or 12 pages. This way, all 4 tables will be on 1 sheet, which can be detached and kept separately and the text used for other purposes. We hope that our readers will find this arrangement more useful.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to: Center for Disease Control  
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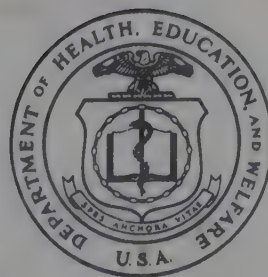
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# Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION  
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## EPIDEMIOLOGIC NOTES AND REPORTS SMALLPOX - Japan, United Kingdom

### Japan

On March 23, 1973, a 33-year-old Japanese civil servant developed fever and rash, 5 days after returning to Tokyo from a 5-week visit to Bangladesh. On March 31, the illness was confirmed by laboratory tests as smallpox. On April 7, Japanese authorities placed 2 additional persons with a suspicion of smallpox—a 46-year-old Tokyo housewife and a 24-year-old student arriving from Bombay—in isolation; subsequent tests for smallpox were negative. Japanese authorities have identified and vaccinated contacts of the patient.

### United Kingdom

On March 1, 1973, a laboratory technician in London was inadvertently exposed to smallpox virus in the laboratory and developed symptoms of smallpox 2 weeks later. On March 28, the United Kingdom reported 2 additional cases of smallpox, both contacts of the laboratory technician, to the

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World Health Organization; 1 patient died. The United Kingdom reports that the other cases have been isolated and contacts vaccinated and placed under observation.

(Reported by the WHO Epidemiological Bulletin; and the Smallpox Eradication Program, CDC.)

### Editorial Note

The present information from Japan and the United Kingdom indicates thorough and aggressive control measures

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	14th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 14 WEEKS		
	April 7, 1973	April 8, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	44	31	31	500	457	393
Brucellosis	4	4	3	25	32	31
Chickenpox	6,109	4,475	---	77,003	54,326	---
Diphtheria	2	1	5	61	27	42
Encephalitis, primary						
Arthropod-borne and unspecified	27	21	20	255	211	271
Encephalitis, post-infectious	5	6	8	55	66	87
Hepatitis, serum (Hepatitis B)	165	174	116	1,977	2,595	1,785
Hepatitis, infectious (Hepatitis A)	864	1,028	1,019	13,623	15,525	15,223
Malaria	4	15	35	60	405	636
Measles (rubeola)	1,366	1,287	1,291	10,449	11,709	11,709
Meningococcal infections, total	28	33	71	470	490	963
Civilian	27	30	64	455	468	871
Military	1	3	10	15	22	99
Mumps	2,030	1,954	3,110	27,320	29,536	36,503
Rubella (German measles)	1,158	955	2,073	10,837	9,702	16,756
Tetanus	—	1	1	15	22	22
Tuberculosis, new active	676	664	---	8,245	8,446	---
Tularemia	—	1	1	18	28	25
Typhoid fever	20	3	4	261	68	65
Typhus, tick-borne (Rky. Mt. spotted fever)	3	1	—	10	13	4
Veneral Diseases:						
Gonorrhea	14,423	12,793	---	202,756	179,837	---
Syphilis, primary and secondary	548	462	---	7,307	6,179	---
Rabies in animals	76	117	88	869	1,144	1,040

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	—
Botulism:	—	Paralytic:	—
Congenital rubella syndrome:	7	Psittacosis:	3
Leprosy: Calif. - 2, Tex. - 1	36	Rabies in man:	—
Leptospirosis:	10	Trichinosis:*	29
Plague:	—	Typhus, murine:	5

\*Delayed reports: Trichinosis: Ohio delete 2

**SMALLPOX – Continued**

have been taken by health authorities. At the present time, travelers to these 2 countries do not appear to have an increased risk of smallpox exposure, and therefore the United States is not requiring proof of vaccination for travelers enter-

ing the United States from Japan or the United Kingdom. However, because other countries may require proof of vaccination and to facilitate travel, it is recommended that travelers to the United Kingdom or Japan who are proceeding to other countries carry a valid vaccination certificate.

**WATERBORNE HEPATITIS-A OUTBREAK – Alabama**

On August 14, 1972, a case of hepatitis-A was reported to the Alabama State Department of Health from a small rural community (population 41) in Jefferson County, Alabama. Investigation revealed that onset of symptoms was approximately August 10. The patient who was mentally retarded had little personal contact with other than immediate family members. A total of 25 household contacts and other residents were given immune serum globulin (ISG); none of the family members became ill. Between August 23 and September 11, however, 8 additional cases of hepatitis-A were clinically diagnosed in the community.

Because of the lack of personal contact with the initial case and because of the spatial and temporal clustering of these subsequent cases, a common source was suspected. There was no evidence of a common food source, but investigation of the community's water supply revealed that all residents drank water from 2 surface springs located uphill from the home of the initial case but downhill from his grandmother's house. This was the only home in the community

that the patient visited, sometimes staying for several days. The sewer system of this house consisted of a single field line, without a septic tank, ending approximately 200 feet above the surface springs. Further investigation revealed that at the beginning of August, 1 spring had gone dry, and during the 1st week of August, water had been pumped from the wet spring to the dry one, allowing for possible contamination of both. Water samples from the 2 springs yielded coliforms too numerous to count.

Following the investigation, adequate chlorinating devices were installed, and subsequent water samples were free of coliform organisms. No additional cases have been reported.

*(Reported by Alex Hicks, Disease Surveillance Coordinator, Clyde A. Sellers, Director, Communicable Disease Bureau, and George E. Hardy, Jr., M.D., Health Officer, Jefferson County Health Department; Frederick S. Wolf, M.D., State Epidemiologist, Alabama State Department of Health; and an EIS Officer.)*

**CURRENT TRENDS****CERTIFICATION OF PET TURTLES – New Jersey**

Between February 20 and March 16, 1973, personnel from the New Jersey State Department of Health bought 19 batches of pet turtles, each consisting of 2-10 animals, at retail stores throughout the state. All but 2 of the stores had certificates for their turtles issued by other states in apparent conformity with Food and Drug Administration (FDA) requirements (MMWR, Vol.21, No. 52). The turtles were held in the State laboratory and carefully handled to prevent contamination and cross-infection. Bacteriologic testing was performed on aquarium water at each water change and on all dying and dead turtles.

Preliminary results on 18 batches showed that 12 (67%) had evidence of contamination with salmonella or Arizona\* organisms. Of the 16 batches with known certification, 10 (63%) were contaminated. These 16 batches represented samples of 6 lots of turtles certified in Mississippi and Louisiana as meeting FDA requirements. Some of these turtles were distributed by wholesalers in New York and had been issued a New York State certificate as well. Five of these 6 lots yielded isolates of salmonella, Arizona, or both.

Remedial action in New Jersey included vigorous enforcement of the State Sanitary Code prohibiting the sale of pet turtles that are not certified by the New Jersey Department of Health. Certificates issued in other states, although allegedly conforming to the new FDA regulations, will not be accepted by the New Jersey Department of Health. Acceptable evidence will be limited to authentication that: 1) the turtles were raised from salmonella-free stock and that ongoing laboratory surveillance indicated continued freedom from contamination throughout the breeding process or that 2) the turtles have been subjected to some therapeutic regimen that can be proved to rid turtles permanently of salmonella infection.

\*A slow lactose-fermenting organism closely related to salmonella.

*(Reported by Martin Goldfield, M.D., Assistant Commissioner, Howard Rosenfeld, D.V.M., Senior Public Health Veterinarian, Bernard F. Taylor, Ph.D., Chief Virologist, Catherine Jedynek, Principal Bacteriologist, and Ronald Altman, M.D., Director, Epidemiologic Services, Division of Laboratories and Epidemiology, New Jersey State Department of Health.)*

**Editorial Note**

FDA regulations concerning interstate shipment of pet turtles and turtle eggs are embodied in the amended version of Part 72, Title 42, of the Code of Federal Regulations. These regulations include detailed specifications for certification by bacteriologic testing of turtles and turtle eggs to identify contamination with salmonella or Arizona organisms.

The high incidence of these pathogens among certified lots of turtles in New Jersey may be due to several factors. The turtles may have been contaminated in transport or after entering the state at the wholesale or retail level as by storage in facilities previously used for infected animals. Alternatively, bacteriologic examination by the current FDA specifications may fail to detect contamination of turtles, especially if they are pretreated with antimicrobial agents such as copper sulfate (1). There is no established treatment that will permanently eradicate salmonella and Arizona infection in turtles, but antimicrobial treatment could temporarily suppress infection. This report suggests that bacteriologic surveillance of pet turtles at the point of sale may be necessary to insure freedom from contamination even in turtles certified at the state of origin.

**Reference**

1. Kaufmann AF, Fox MD, Morris GK, *et al*: Turtle-associated salmonellosis. III. The effects of environmental salmonellae in commercial turtle breeding ponds. *Amer J Epidemiol* 95:521-528, 1972

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING APRIL 7, 1973 AND APRIL 8, 1972 (14th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES .....	44	4	6,109	2	61	27	21	5	165	864	1,028
NEW ENGLAND .....	4	-	680	-	2	1	-	-	5	59	73
Maine *	-	-	6	-	-	-	-	-	-	-	9
New Hampshire *	-	-	26	-	-	-	-	-	1	3	4
Vermont .....	-	-	28	-	-	-	-	-	-	3	6
Massachusetts .....	1	-	386	-	-	1	-	-	-	25	28
Rhode Island .....	2	-	73	-	2	-	-	-	2	17	14
Connecticut .....	1	-	161	-	-	-	-	-	2	11	12
MIDDLE ATLANTIC .....	4	-	439	-	-	2	4	2	35	121	141
Upstate New York .....	1	-	4	-	-	-	1	-	8	45	28
New York City .....	1	-	145	-	-	1	-	-	4	16	36
New Jersey *	2	-	NN	-	-	-	3	-	13	29	53
Pennsylvania .....	-	-	290	-	-	1	-	2	10	31	24
EAST NORTH CENTRAL .....	6	-	2,591	-	-	13	4	-	22	121	138
Ohio .....	-	-	284	-	-	5	1	-	5	40	21
Indiana *	-	-	275	-	-	1	1	-	1	8	12
Illinois .....	1	-	-	-	-	1	-	-	4	24	41
Michigan .....	5	-	806	-	-	6	2	-	12	49	59
Wisconsin .....	-	-	1,226	-	-	-	-	-	-	-	5
WEST NORTH CENTRAL .....	-	-	269	-	6	-	4	-	-	39	45
Minnesota .....	-	-	37	-	-	-	-	-	-	7	6
Iowa .....	---	---	---	---	-	---	3	---	---	---	3
Missouri .....	-	-	8	-	-	-	-	-	-	14	23
North Dakota .....	-	-	24	-	-	-	-	-	-	-	-
South Dakota .....	-	-	5	-	6	-	-	-	-	3	2
Nebraska .....	-	-	25	-	-	-	-	-	-	-	1
Kansas .....	-	-	170	-	-	-	1	-	-	15	10
SOUTH ATLANTIC .....	16	4	550	-	-	6	4	1	26	124	180
Delaware .....	-	-	16	-	-	-	-	-	-	3	7
Maryland .....	1	-	129	-	-	-	-	-	4	12	30
District of Columbia .....	-	-	1	-	-	-	-	-	-	-	1
Virginia .....	1	-	50	-	-	1	-	-	2	12	21
West Virginia .....	-	-	292	-	-	1	-	-	-	2	6
North Carolina .....	1	-	NN	-	-	1	-	-	6	28	28
South Carolina .....	2	-	62	-	-	1	-	-	1	6	13
Georgia .....	1	4	-	-	-	-	-	-	-	28	24
Florida .....	10	-	-	-	-	2	4	1	13	33	50
EAST SOUTH CENTRAL .....	3	-	100	-	-	-	3	1	18	51	47
Kentucky .....	-	-	69	-	-	-	-	-	3	15	13
Tennessee .....	3	-	NN	-	-	-	-	1	8	26	27
Alabama .....	-	-	26	-	-	-	3	-	4	6	6
Mississippi .....	-	-	5	-	-	-	-	-	3	4	1
WEST SOUTH CENTRAL .....	5	-	762	-	2	1	-	-	18	131	72
Arkansas *	1	-	6	-	-	-	-	-	-	3	4
Louisiana .....	1	-	NN	-	-	1	-	-	-	-	14
Oklahoma .....	2	-	71	-	-	-	-	-	1	8	9
Texas .....	1	-	685	-	2	-	-	-	17	120	45
MOUNTAIN .....	1	-	197	1	2	-	-	-	4	36	79
Montana .....	-	-	27	-	-	-	-	-	-	3	4
Idaho .....	1	-	-	-	-	-	-	-	-	8	4
Wyoming .....	-	-	61	-	-	-	-	-	-	1	1
Colorado .....	-	-	71	-	-	-	-	-	3	18	17
New Mexico .....	-	-	37	1	2	-	-	-	-	6	11
Arizona *	-	-	-	-	-	-	-	-	-	-	23
Utah .....	-	-	1	-	-	-	-	-	-	-	8
Nevada .....	-	-	-	-	-	-	-	-	1	-	11
PACIFIC .....	5	-	521	1	49	4	2	1	37	182	253
Washington .....	-	-	347	1	44	-	-	-	1	18	27
Oregon .....	-	-	1	-	3	-	1	-	2	12	29
California .....	5	-	-	-	2	4	1	1	33	143	178
Alaska .....	-	-	40	-	-	-	-	-	1	4	5
Hawaii .....	-	-	133	-	-	-	-	-	-	5	14
Guam *	-	-	-	-	-	-	-	-	-	-	3
Puerto Rico .....	-	-	13	-	-	-	-	-	2	19	11
Virgin Islands .....	-	-	2	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: N.J. delete 1

Hepatitis A: Me. 1, Ind. delete 2, Ark. 10

Chickenpox: Me. 26, N.H. 7, Ark. 1, Guam 6

Ariz. 13, Guam 2

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING APRIL 7, 1973 AND APRIL 8, 1972 (14th WEEK) - Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	4	60	1,366	10,449	11,709	28	470	490	2,030	27,320	1,158	10,837
NEW ENGLAND .....	-	4	357	3,873	862	2	23	24	67	1,150	144	1,062
Maine *	-	-	-	11	120	-	-	3	1	63	-	32
New Hampshire *	-	-	2	544	93	-	3	-	-	105	-	13
Vermont .....	-	2	2	77	69	-	2	-	10	159	-	10
Massachusetts .....	-	-	291	2,125	112	2	9	13	16	432	107	630
Rhode Island .....	-	-	18	283	125	-	1	6	4	98	5	52
Connecticut .....	-	2	44	833	343	-	8	2	36	293	32	325
MIDDLE ATLANTIC .....	1	8	91	858	563	2	66	52	277	2,874	30	1,283
Upstate New York .....	-	4	26	216	57	2	24	14	NN	NN	8	128
New York City .....	-	1	49	480	110	-	13	11	166	1,788	16	126
New Jersey *	-	1	13	80	374	-	14	16	34	541	-	875
Pennsylvania *	1	2	3	82	22	-	15	11	77	545	6	154
EAST NORTH CENTRAL .....	1	7	632	3,373	4,531	5	49	65	562	7,503	374	2,422
Ohio .....	-	2	20	146	153	1	26	21	86	1,163	40	230
Indiana .....	-	1	20	271	751	-	1	9	99	615	55	517
Illinois .....	-	2	213	873	1,614	-	7	15	93	1,430	55	291
Michigan .....	1	2	320	1,559	790	4	15	17	125	1,936	92	627
Wisconsin .....	-	-	59	524	1,223	-	-	3	159	2,359	132	757
WEST NORTH CENTRAL .....	-	2	-	227	389	3	38	44	96	2,828	7	654
Minnesota .....	-	-	-	14	13	-	-	9	6	56	3	119
Iowa .....	---	-	---	149	208	---	5	-	---	1,861	---	118
Missouri .....	-	-	-	12	110	1	19	12	9	321	1	208
North Dakota .....	-	1	-	28	31	-	3	-	1	34	1	35
South Dakota .....	-	-	-	-	4	1	3	2	-	6	1	3
Nebraska .....	-	-	-	1	8	1	4	7	14	70	1	90
Kansas .....	-	1	-	23	15	-	4	14	66	480	-	81
SOUTH ATLANTIC .....	-	7	18	317	1,058	3	80	103	252	3,204	66	913
Delaware .....	-	-	1	2	5	-	-	1	3	160	1	3
Maryland .....	-	-	-	-	8	-	15	16	43	362	-	8
District of Columbia .....	-	-	-	-	-	-	1	2	1	14	-	2
Virginia .....	-	4	2	27	26	-	9	23	19	253	15	267
West Virginia .....	-	-	8	105	74	-	1	6	97	1,149	9	101
North Carolina .....	-	1	-	6	23	2	17	18	NN	NN	10	94
South Carolina .....	-	1	4	26	148	-	7	9	18	176	3	20
Georgia .....	-	-	-	11	112	1	16	1	1	10	1	6
Florida .....	-	1	3	140	662	-	14	27	70	1,080	27	412
EAST SOUTH CENTRAL .....	-	1	132	308	751	2	47	40	121	1,861	55	602
Kentucky .....	-	-	128	201	435	-	22	10	47	613	15	284
Tennessee .....	-	-	4	81	114	1	17	16	37	626	15	220
Alabama .....	-	1	-	-	92	1	4	8	20	231	4	39
Mississippi .....	-	-	-	26	110	-	4	6	17	391	21	59
WEST SOUTH CENTRAL .....	1	7	36	373	721	6	74	61	139	1,910	136	850
Arkansas .....	-	-	8	17	6	-	8	7	16	114	-	86
Louisiana .....	-	1	8	41	32	-	12	19	-	37	21	59
Oklahoma .....	1	1	1	16	5	3	7	4	14	167	58	96
Texas .....	-	5	19	299	678	3	47	31	109	1,592	57	609
MOUNTAIN .....	-	6	10	273	813	-	11	8	106	1,447	136	1,275
Montana .....	-	1	1	5	12	-	2	1	10	119	8	223
Idaho .....	-	-	3	105	3	-	1	2	1	97	5	11
Wyoming .....	-	-	1	10	-	-	-	1	14	309	2	5
Colorado *	-	-	3	68	305	-	2	1	16	157	117	847
New Mexico .....	-	1	2	75	54	-	1	1	65	566	2	115
Arizona *	-	4	-	9	329	-	2	1	-	140	-	14
Utah .....	-	-	-	1	110	-	1	1	-	52	2	58
Nevada .....	-	-	-	-	-	-	2	-	-	7	-	2
PACIFIC .....	1	18	90	847	2,021	5	82	93	410	4,543	210	1,776
Washington .....	-	-	6	332	413	-	6	11	31	565	69	283
Oregon .....	-	1	33	218	19	1	5	5	41	881	23	212
California .....	1	14	50	291	1,533	4	69	74	321	2,663	118	1,270
Alaska .....	-	2	-	-	5	-	2	-	8	342	-	1
Hawaii .....	-	1	1	6	51	-	-	3	9	92	-	10
Guam .....	-	-	-	3	2	-	-	6	-	1	-	2
Puerto Rico .....	-	-	76	672	198	-	3	1	21	265	-	14
Virgin Islands .....	-	-	-	-	1	-	-	2	-	7	-	1

\*Delayed reports: Measles: Ariz. 1

Rubella: Me. 3, N.J. delete 2,

Mumps: Me. 9, N.H. 4

Pa. delete 1, Colo. 225

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING APRIL 7, 1973 AND APRIL 8, 1972 (14th WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES . . . . .	15	676	8,245	18	20	261	3	10	14,423	548	76	869
NEW ENGLAND . . . . .	—	22	270	—	—	3	1	1	376	17	4	56
Maine *	—	1	19	—	—	—	—	—	26	—	—	37
New Hampshire . . . . .	—	1	12	—	—	—	—	—	8	—	4	17
Vermont . . . . .	—	1	6	—	—	—	—	—	9	—	—	1
Massachusetts . . . . .	—	15	151	—	—	3	1	1	179	8	—	1
Rhode Island . . . . .	—	—	21	—	—	—	—	—	34	—	—	—
Connecticut . . . . .	—	4	61	—	—	—	—	—	120	9	—	—
MIDDLE ATLANTIC . . . . .	4	158	1,752	—	1	19	—	1	2,127	124	—	4
Upstate New York . . . . .	—	20	327	—	—	3	—	—	387	—	—	1
New York City . . . . .	2	73	662	—	—	6	—	—	932	89	—	—
New Jersey . . . . .	2	40	323	—	—	6	—	—	228	16	—	—
Pennsylvania . . . . .	—	25	440	—	1	4	—	1	580	19	—	3
EAST NORTH CENTRAL . . . . .	2	46	1,253	—	1	11	—	—	1,567	52	3	81
Ohio *	1	10	425	—	1	5	—	—	407	7	—	11
Indiana . . . . .	—	9	178	—	—	—	—	—	343	29	2	26
Illinois . . . . .	—	5	356	—	—	1	—	—	263	1	1	23
Michigan . . . . .	—	22	237	—	—	3	—	—	463	14	—	1
Wisconsin *	1	—	57	—	—	2	—	—	91	1	—	20
WEST NORTH CENTRAL . . . . .	3	18	302	2	—	7	—	1	649	4	14	219
Minnesota . . . . .	—	2	35	—	—	2	—	—	145	2	4	76
Iowa . . . . .	—	---	33	—	---	—	---	—	---	---	---	60
Missouri . . . . .	3	9	146	2	—	3	—	1	200	—	3	23
North Dakota . . . . .	—	1	8	—	—	—	—	—	8	—	4	43
South Dakota . . . . .	—	2	19	—	—	1	—	—	49	—	—	3
Nebraska . . . . .	—	2	23	—	—	1	—	—	49	—	—	—
Kansas . . . . .	—	2	38	—	—	—	—	—	198	2	3	14
SOUTH ATLANTIC . . . . .	3	161	1,601	4	14	187	2	4	4,043	176	9	83
Delaware . . . . .	—	1	14	—	—	—	—	1	23	—	—	—
Maryland . . . . .	—	23	166	—	—	1	—	—	324	11	1	4
District of Columbia . . . . .	—	9	86	—	—	—	—	—	271	10	—	—
Virginia . . . . .	—	28	216	1	—	—	—	—	220	53	2	34
West Virginia . . . . .	—	4	88	—	—	—	—	—	75	1	—	9
North Carolina . . . . .	—	24	273	1	—	2	1	2	363	16	—	—
South Carolina . . . . .	—	12	166	—	—	1	—	—	671	22	—	—
Georgia . . . . .	—	25	266	2	—	1	1	1	902	28	6	24
Florida . . . . .	3	35	326	—	14	182	—	—	1,194	35	—	12
EAST SOUTH CENTRAL . . . . .	1	64	707	5	—	2	—	3	906	26	21	213
Kentucky . . . . .	—	20	183	1	—	1	—	—	179	6	17	111
Tennessee . . . . .	—	19	202	3	—	—	—	1	386	11	4	76
Alabama . . . . .	1	13	196	—	—	1	—	2	81	2	—	26
Mississippi . . . . .	—	12	126	1	—	—	—	—	260	7	—	—
WEST SOUTH CENTRAL . . . . .	1	83	834	7	—	3	—	—	2,001	75	13	141
Arkansas . . . . .	—	8	89	2	—	—	—	—	147	5	2	35
Louisiana . . . . .	1	15	169	—	—	—	—	—	561	27	1	11
Oklahoma . . . . .	—	5	68	4	—	1	—	—	128	8	4	41
Texas . . . . .	—	55	508	1	—	2	—	—	1,165	35	6	54
MOUNTAIN . . . . .	—	18	260	—	—	2	—	—	419	12	—	3
Montana . . . . .	—	—	5	—	—	—	—	—	20	—	—	—
Idaho . . . . .	—	—	10	—	—	—	—	—	34	—	—	—
Wyoming . . . . .	—	1	9	—	—	—	—	—	12	—	—	—
Colorado . . . . .	—	—	41	—	—	—	—	—	150	2	—	—
New Mexico . . . . .	—	3	66	—	—	1	—	—	61	—	—	—
Arizona*	—	7	105	—	—	1	—	—	88	4	—	3
Utah . . . . .	—	2	10	—	—	—	—	—	14	—	—	—
Nevada . . . . .	—	5	14	—	—	—	—	—	40	6	—	—
PACIFIC . . . . .	1	106	1,266	—	4	27	—	—	2,335	62	12	69
Washington . . . . .	—	12	113	—	—	—	—	—	181	6	—	—
Oregon . . . . .	—	7	61	—	—	2	—	—	210	1	—	—
California . . . . .	1	82	981	—	4	25	—	—	1,824	52	12	67
Alaska *	—	—	36	—	—	—	—	—	79	1	—	2
Hawaii . . . . .	—	5	75	—	—	—	—	—	41	2	—	—
Guam *	—	—	5	—	—	—	—	—	—	—	—	—
Puerto Rico . . . . .	3	10	143	—	—	1	—	—	72	16	2	12
Virgin Islands . . . . .	—	—	—	—	—	—	—	—	4	1	—	—

\*Delayed reports: TB: Me. delete 1, Ohio delete 9, Ariz. 17,

Alaska delete 1, Guam 1

Tularemia: Ohio delete 1

Typhoid: Wis. 2

Gonorrhea: Guam 4

Rabies: (1972) Ohio 7

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING APRIL 7, 1973

Week No.

14

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
<b>NEW ENGLAND</b>	680	411	27	41	<b>SOUTH ATLANTIC</b>	1,265	695	27	42
Boston, Mass.	212	112	15	10	Atlanta, Ga.	142	72	4	1
Bridgeport, Conn.	37	27	—	6	Baltimore, Md.	262	138	4	2
Cambridge, Mass.	36	29	1	7	Charlotte, N. C.	47	19	3	1
Fall River, Mass.	27	16	—	2	Jacksonville, Fla.	84	39	3	1
Hartford, Conn.	51	32	2	—	Miami, Fla.	117	65	4	4
Lowell, Mass.	29	18	—	—	Norfolk, Va.	59	35	3	4
Lynn, Mass.	16	12	—	—	Richmond, Va.	111	63	2	7
New Bedford, Mass.	27	19	—	2	Savannah, Ga.	38	23	—	7
New Haven, Conn.	49	23	4	3	St. Petersburg, Fla.	110	88	1	3
Providence, R. I.	45	22	2	3	Tampa, Fla.	72	45	2	4
Somerville, Mass.	6	5	—	—	Washington, D. C.	188	88	1	7
Springfield, Mass.	40	26	2	4	Wilmington, Del.	35	20	—	1
Waterbury, Conn.	31	20	—	—					
Worcester, Mass.	74	50	1	4	<b>EAST SOUTH CENTRAL</b>	711	404	26	43
<b>MIDDLE ATLANTIC</b>	3,061	1,861	82	131	Birmingham, Ala.	108	53	5	5
Albany, N. Y.	59	34	3	—	Chattanooga, Tenn.	59	32	1	2
Allentown, Pa.	30	20	—	2	Knoxville, Tenn.	47	41	—	2
Buffalo, N. Y.	134	84	8	10	Louisville, Ky.	135	72	3	13
Camden, N. J.	32	17	1	—	Memphis, Tenn.	164	84	6	4
Elizabeth, N. J.	31	22	1	2	Mobile, Ala.	50	35	1	—
Erie, Pa.	50	32	2	5	Montgomery, Ala.	48	27	4	6
Jersey City, N. J.	47	30	2	4	Nashville, Tenn.	100	60	6	11
Newark, N. J.	82	40	3	5					
New York City, N. Y. †	1,559	940	37	55	<b>WEST SOUTH CENTRAL</b>	1,248	694	61	52
Paterson, N. J.	30	20	1	1	Austin, Tex.	41	28	2	2
Philadelphia, Pa.	407	238	11	6	Baton Rouge, La.	24	11	1	2
Pittsburgh, Pa.	189	101	4	17	Corpus Christi, Tex.	36	20	5	—
Reading, Pa.	49	39	—	1	Dallas, Tex.	174	98	10	7
Rochester, N. Y.	111	72	2	9	El Paso, Tex.	51	28	3	8
Schenectady, N. Y.	29	19	—	1	Fort Worth, Tex.	88	41	7	7
Scranton, Pa.	57	38	—	3	Houston, Tex.	226	111	5	3
Syracuse, N. Y.	71	40	4	2	Little Rock, Ark.	55	29	1	—
Trenton, N. J.	40	31	2	2	New Orleans, La.	187	106	14	4
Utica, N. Y.	21	17	1	2	Oklahoma City, Okla. *	87	52	4	2
Yonkers, N. Y.	33	27	—	4	San Antonio, Tex.	121	72	4	3
					Shreveport, La.	69	45	4	4
<b>EAST NORTH CENTRAL</b>	2,384	1,350	108	77	Tulsa, Okla.	89	53	1	10
Akron, Ohio	54	31	4	—					
Canton, Ohio	36	20	2	3	<b>MOUNTAIN</b>	530	300	26	25
Chicago, Ill.	642	346	22	17	Albuquerque, N. Mex.	43	19	4	7
Cincinnati, Ohio	136	85	7	4	Colorado Springs, Colo.	36	24	1	7
Cleveland, Ohio	179	90	17	4	Denver, Colo.	118	73	7	3
Columbus, Ohio	130	71	2	3	Las Vegas, Nev.	52	25	1	—
Dayton, Ohio	101	61	4	6	Ogden, Utah	18	15	1	3
Detroit, Mich.	340	183	20	10	Phoenix, Ariz.	116	63	4	—
Evansville, Ind.	32	19	2	2	Pueblo, Colo.	24	14	—	3
Fort Wayne, Ind.	57	39	2	5	Salt Lake City, Utah	65	35	3	2
Gary, Ind.	23	7	1	1	Tucson, Ariz.	58	32	5	—
Grand Rapids, Mich.	47	29	2	3					
Indianapolis, Ind.	148	77	7	4	<b>PACIFIC</b>	1,623	997	49	32
Madison, Wis.	39	21	4	3	Berkeley, Calif.	17	11	—	—
Milwaukee, Wis.	127	87	3	4	Fresno, Calif.	51	22	6	1
Peoria, Ill.	44	21	2	3	Glendale, Calif.	23	18	1	—
Rockford, Ill.	30	19	1	1	Honolulu, Hawaii	42	22	4	—
South Bend, Ind.	47	31	3	2	Long Beach, Calif.	88	51	1	1
Toledo, Ohio	99	64	1	1	Los Angeles, Calif.	542	322	7	7
Youngstown, Ohio	73	49	2	1	Oakland, Calif.	69	52	4	—
					Pasadena, Calif.	26	18	—	—
<b>WEST NORTH CENTRAL</b>	790	497	41	23	Portland, Oreg.	133	90	3	2
Des Moines, Iowa	55	28	3	2	Sacramento, Calif.	65	36	4	—
Duluth, Minn.	29	19	—	—	San Diego, Calif.	124	71	9	1
Kansas City, Kans.	41	23	3	1	San Francisco, Calif.	166	98	4	10
Kansas City, Mo.	138	101	6	2	San Jose, Calif.	59	39	1	3
Lincoln, Nebr.	24	15	3	2	Seattle, Wash.	130	82	4	4
Minneapolis, Minn.	91	66	7	1	Spokane, Wash.	44	36	—	—
Omaha, Nebr.	75	43	5	1	Tacoma, Wash.	44	29	1	3
St. Louis, Mo.	205	119	6	2					
St. Paul, Minn.	82	48	7	2	<b>Total</b>	12,292	7,209	447	466
Wichita, Kans.	50	35	1	10	<b>Expected Number</b>	12,986	7,527	535	508
					<b>Cumulative Total (includes reported corrections for previous weeks)</b>	194,949	116,523	7,056	9,964

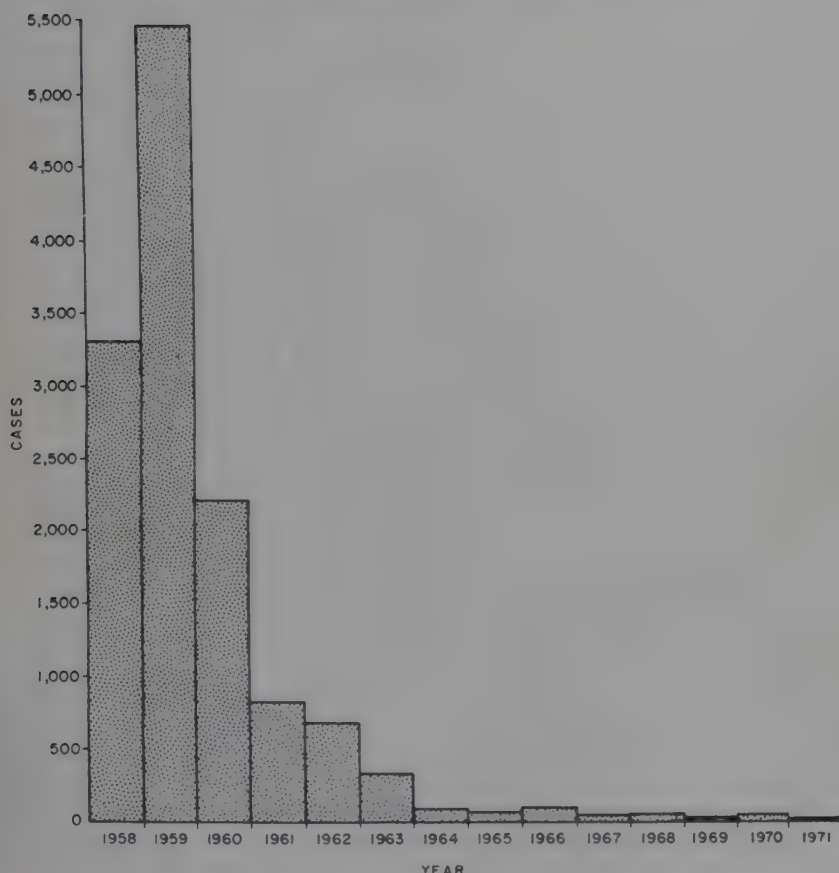
†Delayed report for week ending March 31, 1973

\*Estimate based on average percent of divisional total

SURVEILLANCE SUMMARY  
POLIOMYELITIS — United States, 1971

In 1971, 17 cases of paralytic poliomyelitis with 2 deaths were reported in the United States (Figure 1). This is the lowest annual total reported to CDC since poliomyelitis surveillance was initiated in 1955. The cases were scattered among 12 states; California and Texas with 3 cases each and Montana with 2 cases were the only states to report more than 1 case. Over half (53%) of the cases were in adults, and 47% were in preschool age children. Poliovirus type 1 was the etiologic agent in 5 cases, type 2 was implicated in 6, and type 3 in 5; in 1 case the poliovirus type was unknown. One case was "recipient vaccine-associated"; 8 cases were "contact vaccine-associated", the highest annual number reported to CDC since live attenuated oral poliovirus vaccines became widely used in 1962. None of the persons who contracted paralytic polio in 1971 gave a history of receiving adequate polio vaccinations.

Figure 1  
PARALYTIC POLIOMYELITIS CASES, BY YEAR  
UNITED STATES — 1958-1971



In relation to total doses of oral poliovirus vaccine distributed in the United States, there has been a statistically significant decrease in the rate of "vaccine-associated" paralytic poliomyelitis after 1964 for vaccine recipients ( $p < .0001$ ) and a statistically significant increase in this rate after 1964 for contacts of vaccine recipients ( $p < .0001$ ).

The 1971 National Immunization Survey showed a leveling of the downward trend in the percent of preschool children who received at least 3 doses of oral poliovirus vaccine or at least 3 doses of inactivated poliovaccine (Table 1). Nevertheless, 45.7% of the 1- to 4-year-olds in the poverty areas of U.S. central cities with populations greater than 250,000 did not receive as many as 3 doses of either type of poliovaccine, and 14.0% received no poliovaccine.

Table 1  
Poliovaccine Immunization Status, by Age Group (Under 15 Years)  
United States — 1965-1971

Year	Percentage with $\geq 3$ Doses of OPV or $\geq 3$ Doses of IPV			Percentage with No OPV or IPV Immunization		
	Age Group			Age Group		
	1-4	5-9	10-14	1-4	5-9	10-14
1965	73.9	89.9	92.1	9.9	3.0	2.1
1966	70.2	88.2	90.0	11.3	2.9	2.3
1967	70.9	88.3	89.7	11.7	3.1	2.2
1968	68.3	84.9	87.8	10.5	3.3	2.2
1969	67.7	83.6	85.7	10.2	3.2	2.5
1970	65.9	82.3	85.3	10.8	3.6	2.3
1971	67.3	81.2	83.9	8.6	3.3	2.6

(Reported by the Viral Vaccine Investigations Section, and the Hepatitis and Enteric Virology Section, Virology Branch, Laboratory Division; and the Neurotropic Diseases Unit, Viral Diseases Branch, Epidemiology Program, CDC.)

A copy of the original report from which these data were derived is available on request from

Center for Disease Control  
Attn: Neurotropic Diseases Unit, Viral Diseases Branch  
Epidemiology Program  
Atlanta, Georgia 30333

EPIDEMIOLOGIC NOTES AND REPORTS  
FOLLOW-UP ON BOTULINAL TOXIN IN COMMERCIALY  
CANNED MUSHROOMS — United States

On April 7, 1973, the Fran Mushroom Company, Inc., of Ravena, N.Y., voluntarily recalled all its canned mushroom products from the market as a precautionary measure. The firm initiated a recall of 1 code on April 5, after FDA tests had found it to be contaminated with botulinum type B toxin (MMWR, Vol. 22, No. 13).

(Reported by the Field Investigations Branch, Office of the Associate Commissioner for Compliance, Food and Drug

Administration; and the Bacterial Diseases Branch, Epidemiology Program, CDC.)

#### Editorial Note

This is the 3rd report of commercially canned mushrooms having contamination with type B botulinal toxin since Feb. 17, 1973. No illness associated with any of these products has been reported to CDC.

EPIDEMIOLOGIC NOTES AND REPORTS  
FOLLOW-UP ON SEPTICEMIAS ASSOCIATED WITH CONTAMINATION OF  
INTRAVENOUS FLUIDS — United States

On April 5, 1973, Cutter Laboratories, Inc., expanded its recall of March 19 (MMWR, Vol. 22, No. 13) to include all intravenous products manufactured at its Chattanooga plant prior to Mar. 14, 1973. All subsequent production from this plant was quarantined at the points of distribution. Food and Drug Administration (FDA) scientists investigating Cutter's Chattanooga plant between March 14 and 28 reported that all sterilized fluids from the plant were suspected of not being produced according to good manufacturing practices necessary to guarantee sterility. Hospitals have been notified of the recall by Cutter Laboratories by phone and by letter. Questions about the recall should be directed to Cutter Laboratories or to FDA.

(Reported by the Bureau of Drugs, Food and Drug Admini-

stration; and the Bacterial Diseases Branch, Epidemiology Program, CDC.)

Editorial Note

As reported previously, 5 cases of clinical septicemia, with *Enterobacter agglomerans*, *E. cloacae*, or *Citrobacter freundii*, associated with contamination of 1,000 cc bottles of Cutter's 5% Dextrose in Lactated Ringer's Injection produced in Chattanooga have been reported to CDC. CDC has not confirmed association of human disease with any other Cutter intravenous product.

Erratum, Vol. 22, No. 9, p. 77

In the article, "Typhoid Fever — Florida," correct the date in the 1st sentence, 1st paragraph to read: Feb. 23, 1973.

The Morbidity and Mortality Weekly Report, circulation 30,500, is published by the Center for Disease Control, Atlanta, Ga.

Director, Center for Disease Control  
Director, Epidemiology Program, CDC  
Editor, MMWR

David J. Sencer, M.D.  
Philip S. Brachman, M.D.  
Michael B. Gregg, M.D.

The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to:

Center for Disease Control  
Attn: Editor  
Morbidity and Mortality Weekly Report  
Atlanta, Georgia 30333

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

CENTER FOR DISEASE CONTROL

ATLANTA, GEORGIA 30333

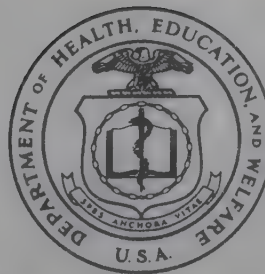
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# *Morbidity and Mortality*

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

DATE OF RELEASE: APRIL 20, 1973 — ATLANTA, GEORGIA 30333

## EPIDEMIOLOGIC NOTES AND REPORTS

### BAT CAVE-ASSOCIATED HISTOPLASMOSIS — Florida

On February 10, 1973, a healthy 18-year-old girl from north central Florida was admitted to the University of Florida Medical Center in severe respiratory distress. Therapy with supplemental oxygen, systemic corticosteroids, and ventilatory assistance was initiated for presumed influenza pneumonia. On the 3rd hospital day, the patient's mother related the occurrence of a respiratory illness in several of her daughter's friends, 3 of whom had been recently hospitalized elsewhere. Subsequently, *Histoplasma capsulatum* was cultured from a bone marrow aspirate.

On further questioning, it was learned that between January 1 and 21, 1973, the patient and 28 members of a church-sponsored youth group, 21 males and 8 females, had explored a bat-infested limestone cave in Suwannee County, Florida. They had entered the cave on 1 or 2 occasions for

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United States, Mexico, 1972	126

approximately 30 minutes. Attempting to encourage the bats to fly, the youths had thrown soil from the cave floor at them. Upon experiencing mild shortness of breath in the dusty atmosphere, several of the explorers left the cave.

Twenty-three of the 29 spelunkers were subsequently identified as infected, for an attack rate of 79%. Predominant symptoms were cough, fever, night sweats, dyspnea on exertion, malaise, and chest congestion. Illness became evident

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	15th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 15 WEEKS		
	April 14, 1973	April 15, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	23	26	26	555	483	428
Brucellosis	2	2	6	28	34	34
Chickenpox	5,409	—	—	84,729	59,735	—
Diphtheria	3	3	2	65	30	45
Encephalitis, primary:						
Arthropod-borne and unspecified	23	23	23	271	234	286
Encephalitis, post-infectious	8	7	7	59	74	92
Hepatitis, serum (Hepatitis B)	196	145	145	2,134	2,791	1,947
Hepatitis, infectious (Hepatitis A)	1,127	1,018	1,018	14,738	16,652	16,241
Malaria	3	15	60	63	420	696
Measles (rubeola)	1,433	1,135	1,135	11,894	12,844	12,844
Meningococcal infections, total	34	26	80	505	516	1,043
Civilian	34	25	60	490	493	931
Military	—	1	6	15	23	111
Mumps	2,418	2,182	3,892	29,771	31,718	40,395
Rubella (German measles)	1,617	781	2,155	12,459	10,483	19,236
Tetanus	—	1	2	15	23	24
Tuberculosis, new active	614	690	—	8,866	9,136	—
Tularemia	1	4	2	19	32	28
Typhoid fever	20	5	5	281	73	66
Typhus, tick-borne (Rky. Mt. spotted fever)	1	6	1	11	19	4
Venereal Diseases:						
Gonorrhea	14,452	14,271	—	217,249	194,108	—
Syphilis, primary and secondary	515	516	—	7,824	6,695	—
Rabies in animals	95	102	102	968	1,246	1,153

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

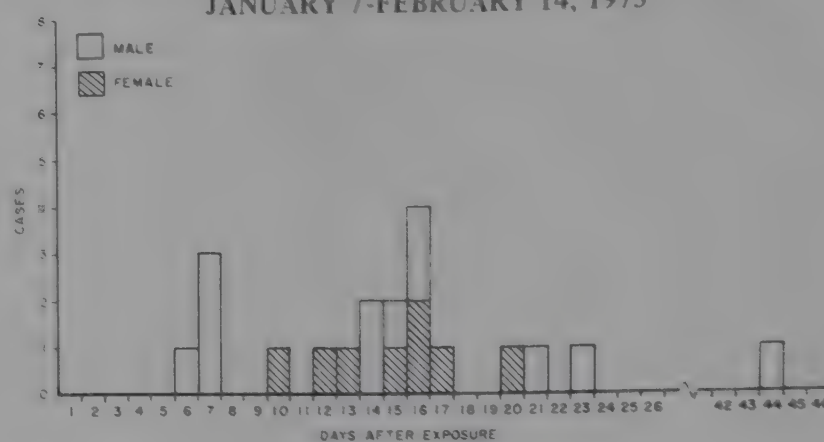
	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	—
Botulism:	—	Paralytic:	—
Congenital rubella syndrome:	7	Psittacosis:	3
Leprosy: Calif. — 1	37	Rabies in man:	—
Leptospirosis:	10	Trichinosis: Conn. — 1, Ohio — 1	31
Plague:	—	Typhus, murine:	5

## HISTOPLASMOSIS — Continued

between 6 and 44 days after exposure (Figure 1). Intradermal histoplasmin tests on 24 of the spelunkers revealed that 15 of 18 reporting illness and 3 of 6 reporting no illness had 10 mm induration or greater at 48 hours. Sera from 26 of the 29 explorers were examined for histoplasmin precipitin bands; 11 of the 20 persons reporting illness that were sampled and 2 of the 6 persons reporting no illness had positive m band precipitins. Yeast form complement fixation tests performed on 10 of the 20 persons reporting illness revealed titers  $>1:32$  in all 10; titers in the 6 persons reporting no illness were not detectable. One convalescent serum from a patient reporting illness demonstrated a histoplasmin titer  $>1:32$ . Chest roentgenograms demonstrated a diffuse miliary infiltrate compatible with acute pulmonary histoplasmosis in 14 of 17 people reporting illness and in 1 of 3 who were clinically well (Table 1). Histoplasmin skin test surveys of 103 local residents revealed indurations of 10 mm or greater in 7 (7%). Histoplasmin and yeast form complement fixation titers on each of 110 sera obtained from local residents were negative. Soil samples taken from the cave floor and bats collected in the cave were submitted to CDC for fungal isolation. Results are pending.

(Reported by Edward Haskell, M.D., Branford, Florida; Robert Waldman, M.D., Associate Professor, Medicine and Microbiology, Stephen R. Zellner, M.D., Clinical Fellow, Division of Infectious and Immunologic Diseases, and Richard Lottenberg, Medical Center, University of Florida College of Medicine; E. Charlton Prather, M.D., Epidemiologist, and Ralph B. Hogan, M.D., State Epidemiologist, Florida Division of Health; the Mycology Branch, Laboratory Division, CDC; and an EIS Officer.)

Figure 1  
HISTOPLASMOSIS CASES WITH SINGLE DATE OF EXPOSURE  
BY INCUBATION PERIOD — SUWANNEE COUNTY, FLORIDA  
JANUARY 7-FEBRUARY 14, 1973



## Editorial Note

Histoplasmosis is most prevalent in the Mississippi and Missouri River valleys. Contact with soil containing an accumulation of either bat or bird excreta is usually required for acquisition of histoplasmosis, and recent evidence suggests that bat habitats are infested with *H. capsulatum*.

Histoplasmosis in humans has been reported from Florida on only 2 previous occasions (1), and both cases were associated with exploration of bat caves; however, the outbreak presented here is the largest known instance of cave-associated histoplasmosis in the state. The data suggest that bat caves infested with *H. capsulatum* are a significant source of infection primarily for subjects who explore them.

## Reference

1. DiSalvo AF, Bigler WJ, Ajello L, Johnson JE, Palmer J: Bat and soil studies for sources of histoplasmosis in Florida. Public Health Rep 85:1063-1069, 1970

Table 1  
Laboratory Results on Patients with Acute Pulmonary Histoplasmosis  
Suwannee County, Florida — February 1973

	Histoplasmin Skin Test >10 mm Induration			Precipitin m Band			Complement Fixation $\geq 1:32$			Chest X-Ray Compatible		
	Positive	Negative	Not Done	Positive	Negative	Not Done	Positive	Negative	Not Done	Positive	Negative	Not Done
Patients ill	15	3	5	11	9	3	10	10	3	14	3	6
Patients not ill	3	3	10	2	4	0	2	4	0	1	2	3

### SURVEILLANCE SUMMARY

#### VENEZUELAN EQUINE ENCEPHALITIS — United States, Mexico, 1972

In 1972, no cases of Venezuelan equine encephalitis (VEE) were reported in equines in the United States, nor was the virus isolated from mosquitoes tested as a part of surveillance activities. However, 2 human VEE cases, imported from Mexico, were reported from California; 1 was confirmed by viral isolation.

Several VEE outbreaks were reported from Mexico in 1972. The 1st cases in equines were reported from the State of Durango, adjacent to areas where the disease was active in 1971 (Figure 2). Serum specimens from 26 acutely ill equines were collected June 2 in the east central part of the state, and an epidemic strain of VEE virus was identified from 8 of the samples. By early July, VEE had been reported by livestock officials in Durango, Nayarit, and Guerrero, and there were indications of VEE activity in Morelos and Sinaloa. On August 9, blood samples were collected from 7 race

horses in Navajoa, Sonora, and epidemic VEE virus was isolated from 2. Equine cases were subsequently reported as far north as an area 40 miles west of Hermosillo (165 miles south of the Arizona-Sonora border). Approximately 1,000 equine and 8 human deaths were recorded in the Sonora outbreak.

In September the disease ceased its northward spread and retreated south. The virus was isolated from 5 of 22 specimens collected between November 17 and 30 in the States of Mexico and Oaxaca. On January 10, 1973, in an area a few kilometers from the confirmed VEE horse cases of November 17, approximately 275 mosquito pools were collected. From 1 pool of 50 *Culiseta inornata*, an epidemic strain of VEE was isolated. This represents the 1st isolate made in a program to study the over-wintering activity of VEE virus.

(Continued on page 131)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING APRIL 14, 1973 AND APRIL 15, 1972 (15th WEEK) - Continued

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES .....	53	3	7,415	4	65	15	23	4	153	1,099	1,127
NEW ENGLAND .....	3	-	987	-	2	-	-	-	3	49	91
Maine *	-	-	-	-	-	-	-	-	-	1	8
New Hampshire *	2	-	35	-	-	-	-	-	-	6	3
Vermont .....	-	-	48	-	-	-	-	-	1	8	8
Massachusetts .....	-	-	549	-	-	-	-	-	-	13	46
Rhode Island .....	1	-	124	-	2	-	-	-	-	4	12
Connecticut .....	-	-	231	-	-	-	-	-	2	17	14
MIDDLE ATLANTIC .....	14	-	179	-	-	1	3	2	35	143	182
Upstate New York .....	1	-	5	-	-	-	-	1	10	60	44
New York City .....	2	-	171	-	-	-	3	-	15	26	32
New Jersey .....	11	-	NN	-	-	-	-	-	4	36	57
Pennsylvania .....	-	-	3	-	-	1	-	1	6	21	49
EAST NORTH CENTRAL .....	4	-	3,669	-	-	3	11	1	30	213	158
Ohio .....	-	-	1,171	-	-	3	2	-	7	41	29
Indiana *	-	-	240	-	-	-	6	-	2	7	10
Illinois .....	-	-	-	-	-	-	2	1	9	69	37
Michigan .....	4	-	954	-	-	-	1	-	12	92	72
Wisconsin *	-	-	1,304	-	-	-	-	-	-	4	10
WEST NORTH CENTRAL .....	-	-	856	1	7	-	-	-	1	41	55
Minnesota .....	-	-	21	-	-	-	-	-	1	9	1
Iowa *	-	-	588	-	-	-	-	-	-	4	11
Missouri .....	-	-	140	-	-	-	-	-	-	10	25
North Dakota .....	-	-	47	-	-	-	-	-	-	3	2
South Dakota .....	-	-	-	1	7	-	-	-	-	-	4
Nebraska .....	-	-	15	-	-	-	-	-	-	1	-
Kansas .....	-	-	45	-	-	-	-	-	-	14	12
SOUTH ATLANTIC .....	7	-	514	-	-	2	3	1	15	162	177
Delaware .....	-	-	24	-	-	1	-	-	-	3	1
Maryland .....	-	-	57	-	-	-	-	-	1	6	21
District of Columbia .....	-	-	11	-	-	-	-	-	-	1	3
Virginia .....	2	-	51	-	-	-	-	1	1	22	29
West Virginia .....	-	-	280	-	-	-	-	-	-	4	8
North Carolina .....	1	-	NN	-	-	-	1	-	1	19	34
South Carolina .....	-	-	91	-	-	1	-	-	1	16	8
Georgia .....	-	-	-	-	-	-	-	-	-	25	11
Florida .....	4	-	-	-	-	-	2	-	11	66	62
EAST SOUTH CENTRAL .....	1	-	83	-	-	1	1	-	11	104	65
Kentucky .....	-	-	54	-	-	-	1	-	10	67	29
Tennessee .....	-	-	NN	-	-	1	-	-	-	36	21
Alabama .....	-	-	25	-	-	-	-	-	-	-	4
Mississippi .....	1	-	4	-	-	-	-	-	1	1	11
WEST SOUTH CENTRAL .....	9	1	324	-	2	6	-	-	14	173	120
Arkansas *	-	-	9	-	-	-	-	-	-	4	5
Louisiana .....	3	-	NN	-	-	5	-	-	9	34	9
Oklahoma .....	4	-	51	-	-	1	-	-	-	20	9
Texas .....	2	1	264	-	2	-	-	-	5	115	97
MOUNTAIN .....	2	-	200	-	2	1	3	-	2	28	58
Montana .....	-	-	30	-	-	-	1	-	-	5	4
Idaho .....	-	-	-	-	-	-	-	-	-	8	3
Wyoming .....	-	-	40	-	-	-	-	-	-	1	-
Colorado .....	2	-	71	-	-	1	-	-	1	3	18
New Mexico .....	-	-	26	-	2	-	-	-	1	6	10
Arizona *	-	-	-	-	-	-	-	-	-	-	13
Utah .....	-	-	33	-	-	-	1	-	-	5	9
Nevada .....	-	-	-	-	-	-	1	-	-	-	1
PACIFIC .....	13	2	603	3	52	1	2	-	42	186	221
Washington .....	-	-	504	3	47	-	-	-	1	12	22
Oregon .....	-	-	-	-	3	-	1	-	1	13	41
California .....	11	2	-	-	2	1	1	-	40	154	142
Alaska .....	-	-	29	-	-	-	-	-	-	4	12
Hawaii .....	2	-	70	-	-	-	-	-	-	3	4
Guam *	-	-	-	-	-	-	-	-	-	-	7
Puerto Rico .....	-	-	9	-	-	-	-	-	1	22	18
Virgin Islands .....	-	-	2	-	-	-	-	-	-	2	-

\*Delayed reports: Aseptic meningitis: N.H. 2

Chickenpox: Me. 29, N.H. 2, Iowa 278,

Ark. 2, Guam 8

Hepatitis B: Wis. 1, Ariz. 3

Hepatitis A: Ind. delete 2, Wis. 4, Iowa 4,

Ark. 8, Ariz. 2, Guam 1

Encephalitis, primary: Iowa 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING APRIL 14, 1973 AND APRIL 15, 1972 (15th WEEK) — Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	3	63	1,433	11,894	12,844	34	505	516	2,418	29,771	1,617	12,459
NEW ENGLAND .....	1	5	374	4,258	961	2	25	24	107	1,264	394	1,460
Maine *	—	—	—	14	142	—	—	3	—	67	—	34
New Hampshire *	—	—	17	569	93	—	3	—	5	113	158	173
Vermont .....	—	2	—	77	70	—	2	—	2	161	1	11
Massachusetts .....	1	1	211	2,336	148	1	10	13	36	468	188	818
Rhode Island .....	—	—	1	284	133	—	1	6	27	125	6	58
Connecticut .....	—	2	145	978	375	1	9	2	37	330	41	366
MIDDLE ATLANTIC .....	1	9	87	945	612	5	71	56	336	3,210	60	1,343
Upstate New York .....	—	4	12	228	57	2	26	15	NN	NN	19	147
New York City .....	—	1	40	520	116	—	13	12	211	1,999	28	154
New Jersey .....	—	1	21	101	416	3	17	16	65	606	—	875
Pennsylvania .....	1	3	14	96	23	—	15	13	60	605	13	167
EAST NORTH CENTRAL .....	—	7	412	3,785	4,862	5	54	66	754	8,257	321	2,743
Ohio .....	—	2	22	168	159	1	27	21	217	1,380	64	294
Indiana .....	—	1	55	326	780	—	1	9	39	654	77	594
Illinois .....	—	2	48	921	1,694	3	10	15	102	1,532	22	313
Michigan .....	—	2	247	1,806	841	1	16	18	227	2,163	51	678
Wisconsin .....	—	—	40	564	1,388	—	—	3	169	2,528	107	864
WEST NORTH CENTRAL .....	—	2	10	239	426	1	39	44	232	3,084	68	723
Minnesota .....	—	—	—	14	13	—	—	9	3	59	13	132
Iowa *	—	—	9	160	218	—	5	—	190	2,075	24	143
Missouri .....	—	—	1	13	132	1	20	12	13	334	—	208
North Dakota .....	—	1	—	28	31	—	3	—	1	35	7	42
South Dakota .....	—	—	—	—	4	—	3	2	1	7	1	4
Nebraska .....	—	—	—	1	10	—	4	7	4	74	23	113
Kansas .....	—	1	—	23	18	—	4	14	20	500	—	81
SOUTH ATLANTIC .....	—	7	324	640	1,176	7	87	111	254	3,458	176	1,089
Delaware .....	—	—	2	4	5	—	—	1	17	177	—	3
Maryland .....	—	—	—	—	9	—	15	20	11	373	—	8
District of Columbia .....	—	—	—	—	—	—	1	2	—	14	—	2
Virginia .....	—	4	305	332	30	2	11	26	46	299	23	290
West Virginia .....	—	—	5	110	98	—	1	6	89	1,238	16	117
North Carolina .....	—	1	—	6	25	1	18	19	NN	NN	18	112
South Carolina *	—	1	4	29	159	—	7	9	28	204	38	58
Georgia .....	—	—	2	13	118	—	16	1	—	10	—	6
Florida .....	—	1	6	146	732	4	18	27	63	1,143	81	493
EAST SOUTH CENTRAL .....	—	1	71	379	807	1	48	42	172	2,033	82	684
Kentucky .....	—	—	69	270	442	—	22	11	74	687	33	317
Tennessee .....	—	—	2	83	137	1	18	17	70	696	19	239
Alabama .....	—	1	—	—	99	—	4	8	4	235	6	45
Mississippi .....	—	—	—	26	129	—	4	6	24	415	24	83
WEST SOUTH CENTRAL .....	—	7	25	398	794	7	81	67	111	2,023	63	913
Arkansas *	—	—	6	23	6	—	8	7	16	132	3	89
Louisiana .....	—	1	8	49	35	4	16	19	8	45	8	67
Oklahoma .....	—	1	1	17	5	—	7	4	18	185	3	99
Texas .....	—	5	10	309	748	3	50	37	69	1,661	49	658
MOUNTAIN .....	—	6	58	331	916	—	11	9	108	1,555	264	1,539
Montana .....	—	1	7	12	12	—	2	1	16	135	117	340
Idaho .....	—	—	44	149	3	—	1	2	2	99	—	11
Wyoming .....	—	—	—	10	—	—	—	1	14	323	—	5
Colorado .....	—	—	—	68	318	—	2	1	14	171	141	988
New Mexico .....	—	1	7	82	64	—	1	1	62	628	5	120
Arizona .....	—	4	—	9	392	—	2	1	—	140	—	14
Utah .....	—	—	—	1	127	—	1	1	—	52	1	59
Nevada .....	—	—	—	—	—	—	2	1	—	7	—	2
PACIFIC .....	1	19	72	919	2,290	6	89	97	344	4,887	189	1,965
Washington .....	—	—	26	358	465	1	7	11	38	603	39	322
Oregon .....	—	1	21	239	22	2	7	5	56	937	24	236
California .....	1	15	24	315	1,734	3	72	78	198	2,861	126	1,396
Alaska *	—	2	—	—	5	—	3	—	38	380	—	1
Hawaii .....	—	1	1	7	64	—	—	3	14	106	—	10
Guam .....	—	—	—	3	2	—	—	6	—	1	—	2
Puerto Rico .....	—	—	98	770	218	1	4	1	15	280	2	16
Virgin Islands .....	—	—	1	1	1	—	—	2	—	7	—	1

\*Delayed reports: Measles: Me. 3, N.H. 8, Iowa 2, S.C. delete 1  
Meningococcal infections: Alaska 1

Mumps: Me. 4, N.J. 3, Iowa 24, Ark. 2  
Rubella: Me. 2, N.H. 2, Iowa 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING APRIL 14, 1973 AND APRIL 15, 1972 (15th WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES .....	15	614	8,866	19	20	281	1	11	14,452	515	95	968
NEW ENGLAND .....	—	18	295	—	—	3	—	1	492	20	6	62
Maine *	—	—	24	—	—	—	—	—	24	—	3	40
New Hampshire *	—	4	18	—	—	—	—	—	14	—	3	20
Vermont .....	—	2	8	—	—	—	—	—	7	—	—	1
Massachusetts .....	—	8	159	—	—	3	—	1	272	12	—	1
Rhode Island .....	—	2	23	—	—	—	—	—	48	—	—	—
Connecticut .....	—	2	63	—	—	—	—	—	127	8	—	—
MIDDLE ATLANTIC .....	4	112	1,864	—	1	20	—	1	1,768	96	1	5
Upstate New York .....	—	25	352	—	—	3	—	—	338	2	1	2
New York City .....	2	21	683	—	1	7	—	—	742	58	—	—
New Jersey .....	2	25	348	—	—	6	—	—	298	20	—	—
Pennsylvania .....	—	41	481	—	—	4	—	1	390	16	—	3
EAST NORTH CENTRAL .....	2	119	1,371	—	—	11	—	—	1,869	24	17	102
Ohio *	1	33	457	—	—	5	—	—	745	8	4	15
Indiana .....	—	14	192	—	—	—	—	—	73	5	4	30
Illinois .....	—	21	377	—	—	1	—	—	300	1	4	27
Michigan .....	—	51	288	—	—	3	—	—	532	10	—	1
Wisconsin *	1	—	57	—	—	2	—	—	219	—	5	29
WEST NORTH CENTRAL .....	3	28	331	2	—	7	—	1	784	3	26	245
Minnesota .....	—	6	41	—	—	2	—	—	160	2	7	83
Iowa *	—	3	37	—	—	—	—	—	105	—	10	70
Missouri .....	3	12	158	2	—	3	—	1	210	1	2	25
North Dakota .....	—	1	9	—	—	—	—	—	15	—	3	46
South Dakota .....	—	2	21	—	—	1	—	—	44	—	—	3
Nebraska .....	—	2	25	—	—	1	—	—	64	—	1	1
Kansas .....	—	2	40	—	—	—	—	—	186	—	3	17
SOUTH ATLANTIC .....	3	106	1,707	5	16	203	1	5	3,538	193	3	86
Delaware .....	—	3	17	—	—	—	—	1	35	3	—	—
Maryland .....	—	5	171	—	—	1	—	—	271	19	—	4
District of Columbia .....	—	6	92	—	—	—	—	—	318	13	—	—
Virginia .....	—	11	227	2	—	—	—	—	394	65	—	34
West Virginia .....	—	5	93	—	—	—	—	—	44	—	—	9
North Carolina .....	—	15	288	1	—	2	—	2	264	12	—	—
South Carolina .....	—	10	176	—	—	1	—	—	352	14	—	—
Georgia .....	—	24	290	2	—	1	1	2	773	18	3	27
Florida .....	3	27	353	—	16	198	—	—	1,087	49	—	12
EAST SOUTH CENTRAL .....	1	73	780	5	—	2	—	3	1,155	25	18	231
Kentucky .....	—	15	198	1	—	1	—	—	86	4	8	119
Tennessee .....	—	26	228	3	—	—	—	1	484	14	6	82
Alabama .....	1	18	214	—	—	1	—	2	290	4	4	30
Mississippi .....	—	14	140	1	—	—	—	—	295	3	—	—
WEST SOUTH CENTRAL .....	1	53	887	7	1	4	—	—	2,214	55	20	161
Arkansas .....	—	7	96	2	—	—	—	—	252	1	8	43
Louisiana *	1	4	173	—	—	—	—	—	420	17	1	12
Oklahoma .....	—	7	75	4	—	1	—	—	306	1	4	45
Texas .....	—	35	543	1	1	3	—	—	1,236	36	7	61
MOUNTAIN .....	—	21	281	—	—	2	—	—	372	5	1	4
Montana .....	—	2	7	—	—	—	—	—	47	—	—	—
Idaho .....	—	—	10	—	—	—	—	—	51	—	—	—
Wyoming .....	—	1	10	—	—	—	—	—	9	2	—	—
Colorado .....	—	13	54	—	—	—	—	—	218	3	—	—
New Mexico .....	—	5	71	—	—	1	—	—	25	—	—	—
Arizona .....	—	—	105	—	—	1	—	—	—	—	1	4
Utah .....	—	—	10	—	—	—	—	—	22	—	—	—
Nevada .....	—	—	14	—	—	—	—	—	—	—	—	—
PACIFIC .....	1	84	1,350	—	2	29	—	—	2,260	94	3	72
Washington .....	—	4	117	—	—	—	—	—	169	3	—	—
Oregon .....	—	4	65	—	—	2	—	—	257	—	—	—
California .....	1	76	1,057	—	2	27	—	—	1,734	85	2	69
Alaska .....	—	—	36	—	—	—	—	—	53	1	1	3
Hawaii .....	—	—	75	—	—	—	—	—	47	5	—	—
Guam *	—	—	5	—	—	—	—	—	—	—	—	—
Puerto Rico .....	3	8	151	—	—	1	—	—	120	29	1	13
Virgin Islands .....	—	—	—	—	—	—	—	—	4	—	—	—

\*Delayed reports: TB: Me. 5, N.H. 2, Ohio delete 1, Iowa 1

Gonorrhea: N.H. 3, Iowa 56, La. delete 18, Guam 7

Syphilis: Iowa 2

Rabies: Wis. 4

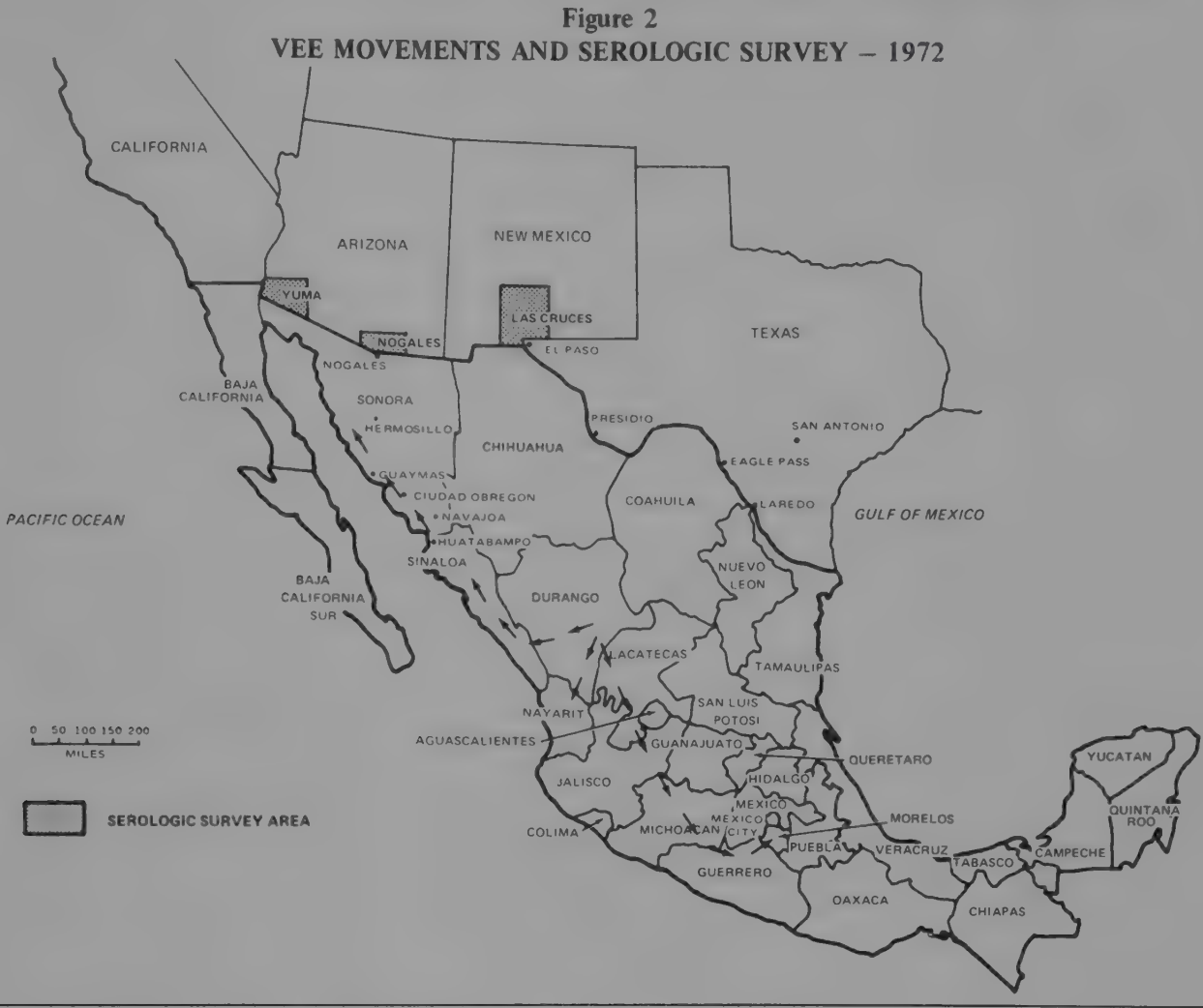
Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	715	445	29	36	SOUTH ATLANTIC	1,122	607	45	45
Boston, Mass.	211	125	13	6	Atlanta, Ga.	98	53	4	5
Bridgeport, Conn.	45	30	1	7	Baltimore, Md.	241	133	15	3
Cambridge, Mass.	24	20	—	8	Charlotte, N. C.	55	25	2	—
Fall River, Mass.	34	15	1	—	Jacksonville, Fla.	86	56	2	—
Hartford, Conn.	66	30	3	1	Miami, Fla.	76	43	3	5
Lowell, Mass.	21	11	—	—	Norfolk, Va.	59	26	4	1
Lynn, Mass.	21	14	—	—	Richmond, Va.	89	52	—	8
New Bedford, Mass.	23	22	—	2	Savannah, Ga.	50	19	—	3
New Haven, Conn.	47	29	2	—	St. Petersburg, Fla.	60	47	—	4
Providence, R. I.	65	43	3	8	Tampa, Fla.	78	43	5	8
Somerville, Mass.	9	6	—	1	Washington, D. C.	177	76	8	7
Springfield, Mass.	60	38	5	3	Wilmington, Del.	53	34	2	1
Waterbury, Conn.	27	19	—	—	EAST SOUTH CENTRAL	687	384	30	39
Worcester, Mass.	62	43	1	—	Birmingham, Ala.	103	48	5	2
MIDDLE ATLANTIC	3,253	1,944	101	119	Chattanooga, Tenn.	56	37	—	5
Albany, N. Y.	57	36	2	2	Knoxville, Tenn.	53	36	1	4
Allentown, Pa.	27	22	1	3	Louisville, Ky.	92	54	6	4
Buffalo, N. Y.	142	87	4	11	Memphis, Tenn.	166	89	6	7
Camden, N. J.	36	26	1	1	Mobile, Ala.	52	36	1	1
Elizabeth, N. J.	30	19	—	2	Montgomery, Ala.	43	24	1	5
Erie, Pa.	35	23	2	4	Nashville, Tenn.	122	60	10	11
Jersey City, N. J.	64	41	1	3	WEST SOUTH CENTRAL	1,352	726	59	50
Newark, N. J.	66	34	8	3	Austin, Tex.	34	17	3	3
New York City, N. Y. †	1,556	931	41	51	Baton Rouge, La.	76	41	4	4
Paterson, N. J.	43	31	3	3	Corpus Christi, Tex.	36	25	—	—
Philadelphia, Pa.	608	333	18	8	Dallas, Tex.	180	79	9	3
Pittsburgh, Pa.	190	99	6	8	El Paso, Tex.	66	36	7	7
Reading, Pa.	47	34	1	3	Fort Worth, Tex.	80	42	4	4
Rochester, N. Y.	116	75	5	9	Houston, Tex.	268	131	11	6
Schenectady, N. Y.	26	15	—	—	Little Rock, Ark.	71	44	6	2
Scranton, Pa.	38	32	—	—	New Orleans, La.	179	104	2	6
Syracuse, N. Y.	78	52	3	1	Oklahoma City, Okla. *	94	54	4	2
Trenton, N. J.	30	18	1	2	San Antonio, Tex.	128	67	9	4
Utica, N. Y.	25	17	—	2	Shreveport, La.	74	48	—	2
Yonkers, N. Y.	39	19	4	3	Tulsa, Okla.	66	38	—	7
EAST NORTH CENTRAL	2,477	1,411	103	72	MOUNTAIN	510	308	24	22
Akron, Ohio	76	48	4	—	Albuquerque, N. Mex.	43	30	3	7
Canton, Ohio	36	19	1	1	Colorado Springs, Colo.	33	19	1	3
Chicago, Ill.	641	314	28	19	Denver, Colo.	138	77	8	5
Cincinnati, Ohio	128	89	3	4	Las Vegas, Nev.	25	11	—	2
Cleveland, Ohio	194	109	6	—	Ogden, Utah	15	11	—	1
Columbus, Ohio	133	85	10	—	Phoenix, Ariz.	107	66	8	—
Dayton, Ohio	111	67	3	6	Pueblo, Colo.	20	15	—	3
Detroit, Mich.	336	186	11	8	Salt Lake City, Utah	62	39	2	1
Evansville, Ind.	38	25	4	3	Tucson, Ariz.	67	40	2	—
Fort Wayne, Ind.	48	32	3	4	PACIFIC	1,690	1,059	58	43
Gary, Ind.	37	16	4	4	Berkeley, Calif.	21	15	—	—
Grand Rapids, Mich.	58	35	2	5	Fresno, Calif.	67	33	4	1
Indianapolis, Ind.	163	80	10	3	Glendale, Calif.	31	22	—	2
Madison, Wis.	32	17	—	3	Honolulu, Hawaii	68	34	5	1
Milwaukee, Wis.	118	82	—	3	Long Beach, Calif.	107	73	1	3
Peoria, Ill.	54	26	5	—	Los Angeles, Calif.	533	334	14	12
Rockford, Ill.	45	28	1	4	Oakland, Calif.	70	48	1	1
South Bend, Ind.	47	36	1	1	Pasadena, Calif.	34	25	—	1
Toledo, Ohio	124	75	7	2	Portland, Oreg.	140	86	4	—
Youngstown, Ohio	58	42	—	2	Sacramento, Calif.	57	32	6	—
WEST NORTH CENTRAL	796	520	30	36	San Diego, Calif.	98	53	4	3
Des Moines, Iowa	32	18	1	2	San Francisco, Calif.	179	111	3	5
Duluth, Minn.	29	23	—	9	San Jose, Calif.	38	28	1	—
Kansas City, Kans.	39	19	1	2	Seattle, Wash.	147	93	13	4
Kansas City, Mo.	149	95	6	2	Spokane, Wash.	60	46	2	6
Lincoln, Nebr.	29	17	2	1	Tacoma, Wash.	40	26	—	4
Minneapolis, Minn.	118	76	9	2	Total	12,602	7,404	479	462
Omaha, Nebr.	73	51	4	1	Expected Number	12,888	7,452	533	491
St. Louis, Mo.	206	137	3	10	Cumulative Total (includes reported corrections for previous weeks)	207,548	123,918	7,539	10,422
St. Paul, Minn.	59	43	2	2					
Wichita, Kans.	62	41	2	5					

†Delayed report for week ending April 7, 1973  
\*Estimate based on average percent of divisional total

VEE – Continued

Surveillance activities by a number of cooperating federal, state, and local agencies to monitor possible VEE activity in mosquitoes, equines, and other species will continue in the next mosquito season.  
(Reported by the Office of Veterinary Public Health Services, Epidemiology Program, CDC.)

A copy of the original report from which these data were derived is available on request from  
Center for Disease Control  
Attn: Office of Veterinary Public Health Services  
Epidemiology Program  
Atlanta, Georgia 30333



EPIDEMIOLOGIC NOTES AND REPORTS  
DIPHTHERIA – Rhode Island

In January 1973, 2 persons with diphtheria and 1 carrier from the same family were discovered in Providence, Rhode Island. The investigation is summarized below.

**Case 1:** On December 31, 1972, an 11-year-old boy developed a sore throat and difficulty in swallowing. Two days later, he complained of difficulty in breathing and was admitted to the Roger Williams General Hospital. Physical examination disclosed a temperature of 38.6°C, bilateral tonsillar hypertrophy and a yellowish-gray exudate, foul smelling odor to his breath, and tender, marked cervical lymphadenopathy. Pharyngeal cultures were obtained and intravenous penicillin was begun. Three days later, he was afebrile and improved, but the tonsillar exudate had formed an adherent membrane, which caused bleeding when removed. The initial pharyngeal culture grew no pathogens, but a repeat culture obtained after 3 days of penicillin therapy and planted on Loeffler's and tellurite media grew a toxin-producing (Elek plate) *Corynebacterium diphtheriae*, mitis strain. Club-shaped rods with granules were visualized in a methylene blue stain of the membrane.

Subsequent hospital course was uneventful, and several electrocardiograms were normal. After a 10-day course of penicillin, 2 pharyngeal cultures were negative for *C. diphtheriae*. The patient was discharged on January 14.

According to the parents, the child had received a basic

series of immunizations in infancy and a subsequent booster, but confirmation from a physician could not be obtained. A Schick test was negative. A booster dT was given subsequently.

**Case 2:** On January 7, 1973, the 1st patient's 6-year-old brother developed a low grade fever, malaise, cough, and sore throat. Two days later, he was hospitalized. On admission, he had a temperature of 38.0°C, bilateral enlarged tonsils with punctate, white exudate, and mild cervical lymphadenopathy. A throat culture that had been taken just prior to the onset of symptoms was found positive for *C. diphtheriae*, mitis strain, toxin-positive. After negative intradermal and conjunctival tests for horse serum hypersensitivity, 20,000 units of antitoxin was administered intravenously over 6 hours. Penicillin was given for 8 days. The patient's hospital course was uneventful. After the course of penicillin was completed, 2 pharyngeal cultures were negative for *C. diphtheriae*, and the patient was discharged January 20.

This patient's history of immunizations, given by the mother, was similar to that of the older sibling, but a Schick test was positive (17 mm induration after 5 days). A basic series of dT immunization was started.

Epidemiologic surveillance of contacts of these 2 patients revealed 1 diphtheria carrier, the 9-year-old sister of the 2 patients, who was quarantined at home for 14 days until her throat culture became negative for *C. diphtheriae*. A

**DIPHTHERIA – Continued**

throat culture 7 days after an injection of benzathine penicillin was positive, but after an additional 7-day course of oral erythromycin, a repeat throat culture was negative. Negative pharyngeal cultures were obtained from the other 3 family members, 4 hospital patients in contact with Case 1, and 61 hospital personnel, many of whom requested to be cultured despite minimal contact with the patients. Sixty-two children in the same school classes of the 3 affected family members also were culture negative. Booster dT immunizations were recommended for these children and hospital personnel\* in close contact with the 2 patients. An additional 46 close contacts of the children were also culture negative for *C. diphtheriae*.

As initially reflected by the city of Providence and later illustrated by the state as a whole, diphtheria began to decrease in Rhode Island coincident with the introduction in 1921 of active immunization with diphtheria toxin-antitoxin (Figure 3). The cases presented here represent the 1st *C. diphtheriae* isolations in Rhode Island since November 1971. (Reported by Georges Peter, M.D., and Stephen H. Zinner, M.D., Division of Infectious Diseases, and T. Shikashio, Head, Microbiology Section, Roger Williams General Hospital; Joseph E. Cannon, M.D., Director, Rhode Island Department of Health; and an EIS Officer.)

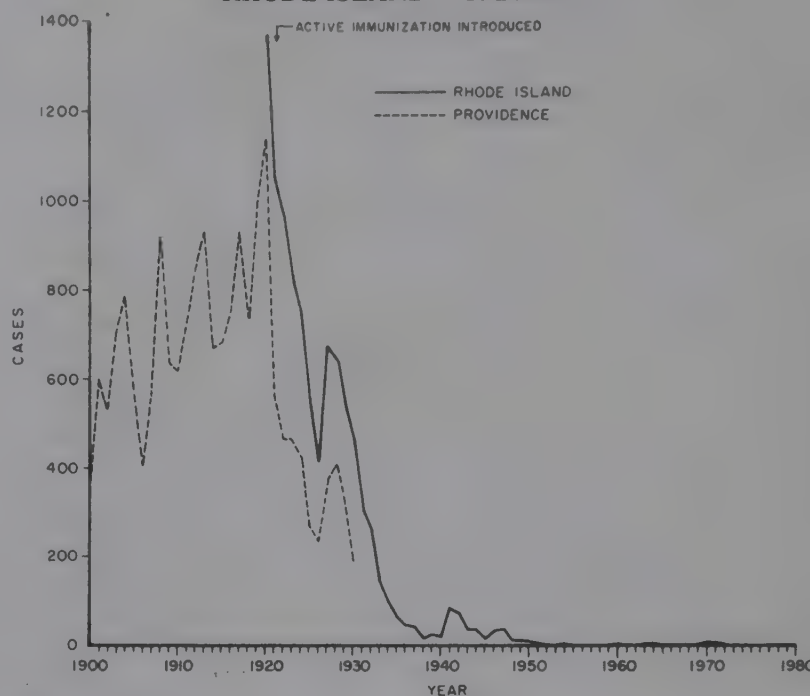
**Editorial Note**

In the investigation of contacts of sporadic cases of diphtheria, family contacts frequently are found to be car-

\*A survey of hospital employees involved in patient care indicated that many had not received diphtheria boosters for more than 10 years. Review and updating of the immunization status of hospital employees has been recommended.

riers of *C. diphtheriae*, but carriage among more distant contacts (school classmates, playmates, hospital contacts) is much less common.

**Figure 3**  
**DIPHTHERIA CASES, BY YEAR**  
**PROVIDENCE – 1900-1930**  
**RHODE ISLAND – 1920-1972**

**Erratum, Vol. 22, No. 12, p. 101**

In the article "*Shigella dysenteriae* 1 – Colorado," total colectomy was performed because of extensive necrotizing enterocolitis, rather than intestinal perforation as stated. Also, *S. dysenteriae* 1 was recovered from culture of blood, not from rectal swab.

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Michael B. Gregg, M.D.

The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to:

Center for Disease Control  
Attn: Editor  
Morbidity and Mortality Weekly Report  
Atlanta, Georgia 30333

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CENTER FOR DISEASE CONTROL  
ATLANTA, GEORGIA 30333

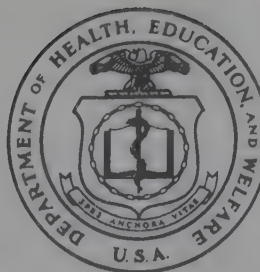
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# Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION  
DATE OF RELEASE: APRIL 27, 1973 - ATLANTA, GEORGIA 30333

## EPIDEMIOLOGIC NOTES AND REPORTS SYPHILIS - West Virginia

An 18-year-old male reported to a large private company in West Virginia for a routine preemployment physical examination. As is the practice with the company, a VDRL test for syphilis was included in the examination. The serology results were returned with a reactive titer of 1:64, and re-examination established a diagnosis of secondary syphilis. Public health officials were notified and asked to conduct an epidemiologic follow-up of the patient.

A confidential interview for recent sexual contacts produced the names of 6 persons who had been exposed to this patient during the time he could have acquired or spread his disease. These 6 were located and examined, and 2 new cases of syphilis were discovered. From the interviews with these 2 individuals, an additional 41 contacts were brought to examination, and 11 were diagnosed as having syphilis.

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In all, 137 persons have been examined, and 18 new cases of syphilis have been identified. Both heterosexual and homosexual behavior has played a part, and 1 case of early congenital syphilis is directly related to this outbreak. There have been 25 out-of-state investigations which brought 5 of the cases to treatment.

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	16th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 16 WEEKS		
	April 21, 1973	April 21, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	31	28	28	587	524	454
Brucellosis	2	3	3	30	36	38
Chickenpox	5,752	5,925	5,925	90,488	65,660	---
Diphtheria	—	3	3	65	33	48
Encephalitis, primary:						
Arthropod-borne and unspecified	23	17	17	294	249	309
Encephalitis, post-infectious	8	10	10	67	84	94
Hepatitis, serum (Hepatitis B)	146	168	137	2,282	2,959	2,084
Hepatitis, infectious (Hepatitis A)	927	990	1,006	15,680	17,651	17,387
Malaria	7	13	38	70	433	746
Measles (rubeola)	1,099	1,301	1,301	13,006	14,145	14,145
Meningococcal infections, total	36	32	66	541	548	1,109
Civilian	36	30	58	526	523	989
Military	—	2	8	15	25	117
Mumps	2,150	2,261	2,745	31,945	33,979	43,127
Rubella (German measles)	1,419	998	2,000	14,177	11,481	20,917
Tetanus	4	1	3	19	24	27
Tuberculosis, new active	694	738	---	9,553	9,874	---
Tularemia	1	2	1	20	34	30
Typhoid fever	8	5	4	289	78	74
Typhus, tick-borne (Rky. Mt. spotted fever)	2	2	2	13	21	6
Venereal Diseases:						
Gonorrhea	13,635	13,038	---	230,981	207,146	---
Syphilis, primary and secondary	483	497	---	8,309	7,192	---
Rabies in animals	77	123	90	1,071	1,369	1,243

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	—
Botulism:	—	Paralytic:	—
Congenital rubella syndrome:	7	Psittacosis:	3
Leprosy: Ill. - 1:	38	Rabies in man:	—
Leptospirosis:	10	Trichinosis:	31
Plague:	—	Typhus, murine: Hawaii - 1	6

## SYPHILIS — Continued

Another smaller outbreak in the same area of West Virginia involving 5 new cases and 47 contacts has also been reported and is thought to be linked to the earlier outbreak.

The section of the state where these outbreaks occurred is sparsely populated. There is no public VD clinic, and private physicians' services are limited. A public health team, made up of 1 physician, a nurse, and 3 VD field representatives, was sent into this area during the epidemic situation to conduct special clinics.

As a result of this outbreak, a renewed interest and a higher "index of suspicion" have been generated, and the

local health department and private physicians have assumed responsibility for VD control activities.

*(Reported by N. H. Dyer, M.D., State Director of Health, and William L. Cooke, Director, Division of Disease Control, West Virginia Department of Health.)*

## Editorial Note

A disease surveillance system coupled with responsive epidemic assistance is essential in the national program to reduce the threat of syphilis.

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 SURVEILLANCE SUMMARY  
 INFLUENZA — 1972-73

## UNITED STATES

The 1972-73 influenza season saw the emergence of a moderately distinctive but not altogether new variant of the prototype Hong Kong virus. A/England/42/72 became the prevalent type A influenzavirus throughout the world during this past year.

The 1st outbreaks of the season in the United States were reported in military installations in the western United States. The 1st occurred between October 21, 1972, and November 4, 1972, at the United States Air Force Academy in Colorado Springs, Colorado. The clinical attack rate for the 2-week period was 221 per 1,000 cadets; a total of 870 cadets reported to sick call during the outbreak. Subsequently, during the week ending November 4, 1972, an outbreak of influenza-like disease occurred at Lowry Air Force Base near Denver. In late November and early December, 2 other military outbreaks were reported from Fort Huachuca in southeastern Arizona and Ent Air Force Base near Colorado Springs.

During the last week of November, the 1st major civilian outbreak was noted in Baltimore, Maryland. It was heralded by a 20% to 30% increase in emergency room visits at 2 local hospitals. The outbreak was confirmed by isolations of influenzavirus both at CDC and in Maryland. During the last week of November and the 1st 2 weeks of December, CDC received reports of isolated outbreaks of influenza-like disease from Pueblo, Colorado, 2 colleges in Massachusetts, and a job corps training center in Pennsylvania. By December 23, 1972, influenzavirus had been isolated from 14 states, and there were significant ongoing outbreaks in New York City, Baltimore, and the San Francisco Bay area. By the end of the 1st week in January, the virus had been isolated in 18 states (Arizona, Connecticut, Massachusetts, New Jersey, New York, Georgia, North Carolina, Colorado, Kansas, Texas, Pennsylvania, Maryland, Washington, Illinois, California, Tennessee, Hawaii, and Iowa), and outbreaks of influenza were being reported in New York, Boston, Chicago, Memphis, the Baltimore-Washington, D.C., area, and the San Francisco Bay area. In addition, pneumonia-influenza deaths reported to CDC from 122 U.S. Cities exceeded expected levels for the 1st time in the current influenza season that week; by January 13, 1973, these deaths had exceeded the epidemic threshold for 2

consecutive weeks and were, therefore, considered significant. Analysis of mortality data on a regional basis showed that the Mid-Atlantic states (New York, New Jersey, and Pennsylvania) and the Pacific area (Washington, Oregon, and California) also showed mortality exceeding the epidemic threshold for 2 or more consecutive weeks. At that time, influenza or influenza-like disease had been reported from 24 states in each major geographic area of the country, with major outbreaks continuing in the metropolitan areas of Boston, Chicago, New York, Pittsburgh, San Francisco, and Washington, D.C.

By the end of January 1973, morbidity from influenza was decreasing in the Northeast, but states in the Southeast and Midwest were reporting an increasing number of cases of influenza. Pneumonia-influenza related mortality reported from 122 U.S. Cities reached a peak in the week ending February 3, 1973, and continued to decline, dipping below the epidemic threshold for the 1st time in the week ending March 17, 1973 (Figures 1, 2). This season, approximately 2,200 excess deaths due to pneumonia and influenza were reported to CDC from 122 U.S. Cities. This year's excess mortality was the greatest since the appearance of the Hong Kong virus in 1968-69. Influenza B activity in the United States was minimal.

## WORLDWIDE

Worldwide, influenza appears to have been widespread throughout Western Europe and the Soviet Union; in the United Kingdom during the month of December, total deaths and new bed claims (a function of morbidity) exceeded last year's levels. In the Soviet Union, Moscow and Leningrad were the 2 cities most heavily affected; during the peak of the influenza season, they were reporting 30,000 to 70,000 new cases daily. France, Germany, Holland, and some countries in Eastern Europe also reported widespread influenza during the 1972-73 season.

*(Reported by the World Health Organization: Weekly Epidemiological Record, Vol. 47, Nos. 41-44, 46, 47, 50, and Vol. 48, Nos. 1-10, 12, 13; the International Influenza Center for the Americas, and the Viral Diseases Branch, Epidemiology Program, CDC.)*

Figure 1  
PNEUMONIA-INFLUENZA DEATHS IN 122 UNITED STATES CITIES

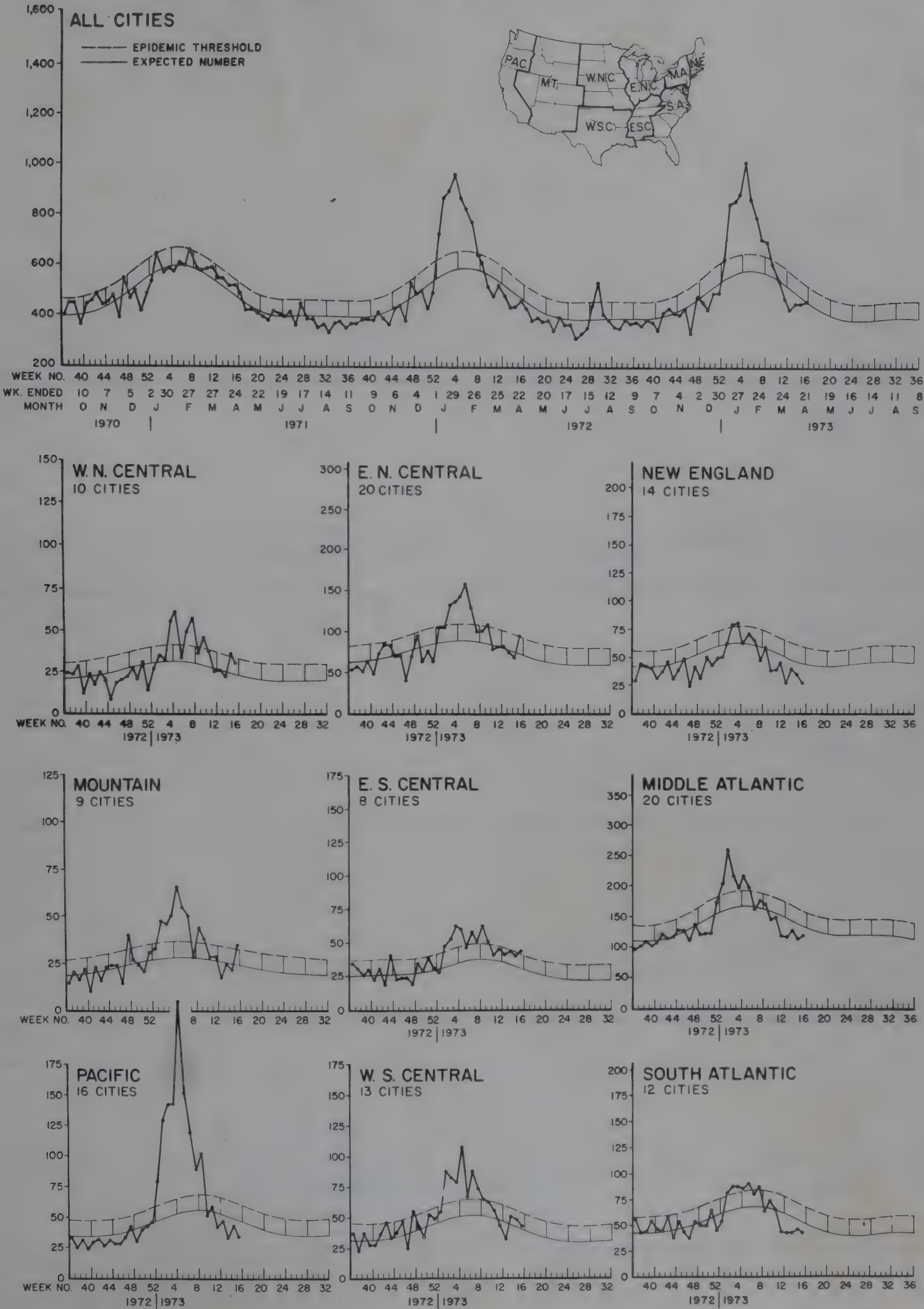


Figure 2  
MORTALITY IN 122 UNITED STATES CITIES

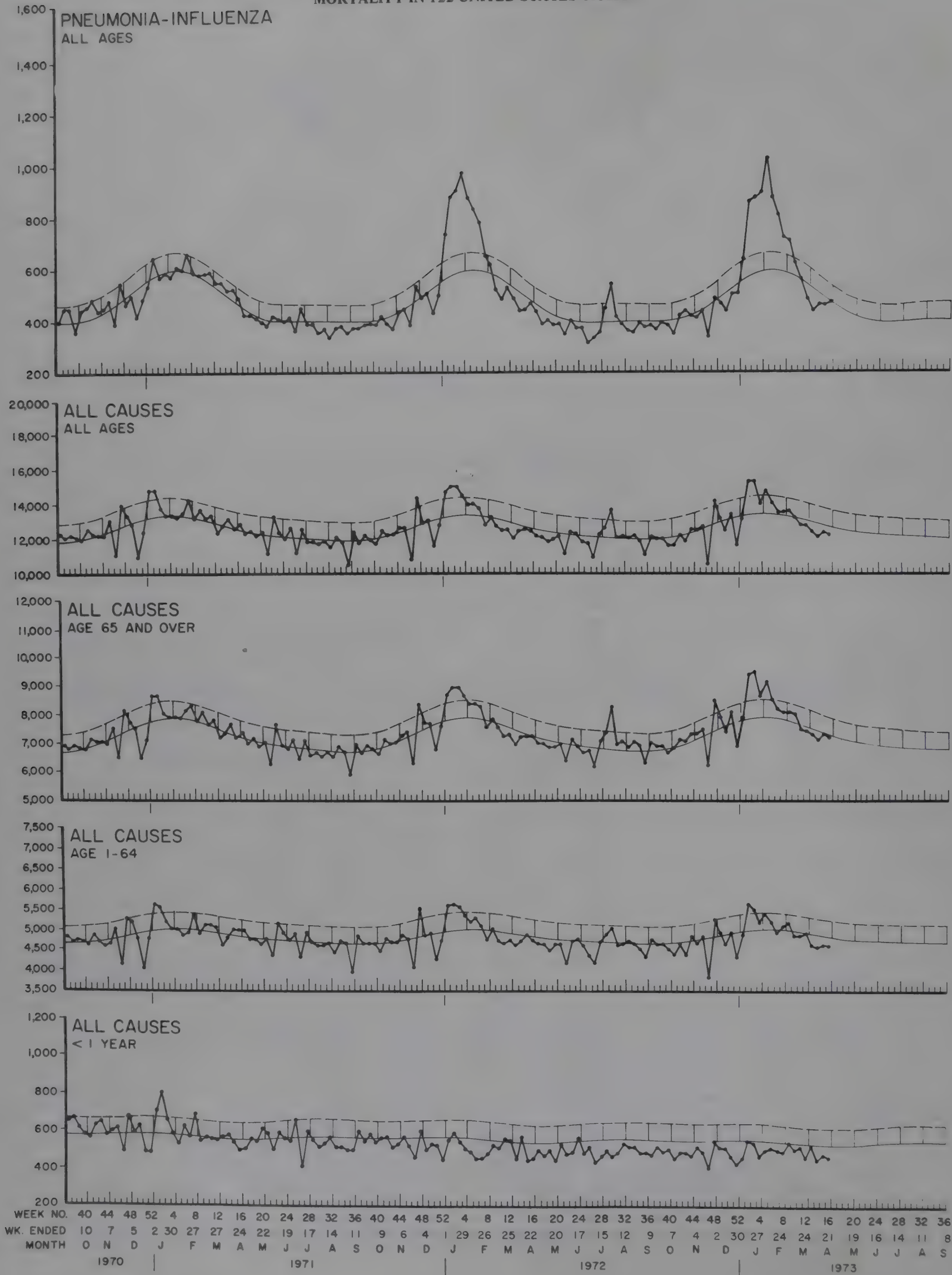


TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING APRIL 21, 1973 AND APRIL 22, 1972 (16th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHtherIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
	1973	1973	1973	1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES .....	31	2	5,752	-	65	23	15	8	146	927	999
NEW ENGLAND .....	1	-	714	-	2	1	1	-	5	58	79
Maine*	-	-	-	-	-	-	-	-	-	-	9
New Hampshire *	-	-	23	-	-	-	-	-	-	4	3
Vermont .....	-	-	37	-	-	-	-	-	1	2	8
Massachusetts .....	-	-	333	-	-	1	1	-	1	29	28
Rhode Island .....	1	-	111	-	2	-	-	-	1	10	10
Connecticut .....	-	-	210	-	-	-	-	-	2	13	21
MIDDLE ATLANTIC .....	4	-	472	-	-	4	-	-	29	167	135
Upstate New York .....	-	-	3	-	-	-	-	-	4	60	30
New York City .....	-	-	167	-	-	2	-	-	10	24	32
New Jersey .....	3	-	NN	-	-	-	-	-	6	37	55
Pennsylvania .....	1	-	302	-	-	2	-	-	9	46	18
EAST NORTH CENTRAL .....	5	-	2,590	-	-	4	5	2	16	160	167
Ohio .....	-	-	553	-	-	1	1	-	2	19	49
Indiana .....	-	-	163	-	-	-	-	-	-	4	10
Illinois .....	-	-	-	-	-	1	4	2	7	63	49
Michigan .....	5	-	735	-	-	2	-	-	7	71	53
Wisconsin .....	-	-	1,139	-	-	-	-	-	-	3	6
WEST NORTH CENTRAL .....	-	1	428	-	7	5	2	1	6	53	51
Minnesota .....	-	-	11	-	-	-	-	1	-	4	9
Iowa .....	-	-	323	-	-	3	2	-	1	6	7
Missouri .....	-	1	17	-	-	1	-	-	1	19	15
North Dakota .....	-	-	35	-	-	-	-	-	-	-	2
South Dakota .....	-	-	2	-	7	-	-	-	-	6	2
Nebraska .....	-	-	5	-	-	-	-	-	-	2	7
Kansas .....	-	-	35	-	-	1	-	-	4	16	15
SOUTH ATLANTIC .....	6	1	472	-	-	-	1	-	22	128	152
Delaware .....	-	-	34	-	-	-	-	-	-	1	-
Maryland .....	-	-	48	-	-	-	-	-	1	17	22
District of Columbia .....	-	-	7	-	-	-	-	-	2	2	2
Virginia .....	1	-	95	-	-	-	1	-	6	27	11
West Virginia .....	-	-	248	-	-	-	-	-	-	-	13
North Carolina .....	-	-	NN	-	-	-	-	-	7	19	27
South Carolina .....	-	-	40	-	-	-	-	-	-	9	6
Georgia .....	-	1	-	-	-	-	-	-	-	4	11
Florida .....	5	-	-	-	-	-	-	-	6	49	60
EAST SOUTH CENTRAL .....	6	-	136	-	-	2	2	-	5	60	48
Kentucky .....	-	-	114	-	-	1	-	-	-	9	13
Tennessee .....	-	-	NN	-	-	-	-	-	1	34	19
Alabama .....	6	-	6	-	-	-	2	-	4	10	9
Mississippi .....	-	-	16	-	-	1	-	-	-	7	7
WEST SOUTH CENTRAL .....	5	-	466	-	2	1	1	3	-	90	85
Arkansas *	-	-	12	-	-	-	-	-	-	3	1
Louisiana .....	-	-	NN	-	-	-	-	-	-	5	16
Oklahoma .....	3	-	45	-	-	-	-	-	-	13	10
Texas .....	2	-	409	-	2	1	1	3	-	69	58
MOUNTAIN .....	-	-	176	-	2	-	-	-	5	23	43
Montana .....	-	-	11	-	-	-	-	-	-	2	4
Idaho .....	-	-	-	-	-	-	-	-	1	5	5
Wyoming .....	-	-	30	-	-	-	-	-	-	2	1
Colorado .....	-	-	101	-	-	-	-	-	4	11	11
New Mexico .....	-	-	30	-	2	-	-	-	-	3	9
Arizona *	-	-	-	-	-	-	-	-	-	-	11
Utah .....	-	-	4	-	-	-	-	-	-	-	2
Nevada .....	-	-	-	-	-	-	-	-	-	-	-
PACIFIC .....	4	-	298	-	52	6	3	2	58	188	239
Washington .....	-	-	284	-	47	-	1	-	3	22	5
Oregon .....	-	-	2	-	3	-	-	-	2	18	35
California .....	4	-	-	-	2	6	2	2	49	140	192
Alaska .....	-	-	9	-	-	-	-	-	4	4	-
Hawaii .....	-	-	3	-	-	-	-	-	-	4	7
Guam .....	-	-	-	-	-	-	-	-	-	-	5
Puerto Rico .....	-	-	7	-	-	-	-	-	1	6	13
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: N.H. 1  
Chickenpox: Ark. 7Hepatitis B: Ariz. 2  
Hepatitis A: Me. 2, N.H. 1, Ark. 2, Ariz. 10

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING APRIL 21, 1973 AND APRIL 22, 1972 (16th WEEK) — Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	7	70	1,099	13,006	14,145	36	541	548	2,150	31,945	1,419	14,177
NEW ENGLAND .....	—	5	341	4,610	1,119	1	26	24	83	1,358	211	1,672
Maine *	—	—	—	14	154	—	—	3	—	67	—	34
New Hampshire *	—	—	20	600	98	1	4	—	9	133	27	201
Vermont .....	—	2	2	79	70	—	2	—	2	163	—	11
Massachusetts .....	—	1	257	2,593	161	—	10	13	33	501	142	960
Rhode Island .....	—	—	16	300	154	—	1	6	7	132	—	58
Connecticut .....	—	2	46	1,024	482	—	9	2	32	362	42	408
MIDDLE ATLANTIC .....	1	10	73	1,017	651	8	79	57	416	3,626	189	1,829
Upstate New York .....	1	5	19	247	70	4	30	15	NN	NN	10	157
New York City .....	—	1	35	554	127	2	15	12	208	2,207	30	184
New Jersey *	—	1	15	116	429	1	18	16	158	764	148	1,320
Pennsylvania .....	—	3	4	100	25	1	16	14	50	655	1	168
EAST NORTH CENTRAL .....	2	9	475	4,260	5,523	2	56	72	561	8,818	347	3,090
Ohio .....	—	2	10	178	175	1	28	26	118	1,498	23	317
Indiana .....	—	1	10	336	843	—	1	9	18	672	22	616
Illinois .....	2	4	67	988	2,008	—	10	15	113	1,645	75	388
Michigan .....	—	2	319	2,125	925	1	17	19	193	2,356	168	846
Wisconsin .....	—	—	69	633	1,572	—	—	3	119	2,647	59	923
WEST NORTH CENTRAL .....	1	3	23	262	483	4	43	46	144	3,228	33	756
Minnesota .....	—	—	—	14	14	—	—	10	1	60	5	137
Iowa .....	—	—	23	183	263	—	5	—	92	2,167	—	143
Missouri .....	1	1	—	13	135	3	23	13	10	344	16	224
North Dakota .....	—	1	—	28	36	—	3	—	11	46	1	43
South Dakota .....	—	—	—	—	4	—	3	2	—	7	—	4
Nebraska .....	—	—	—	1	13	—	4	7	—	74	1	114
Kansas .....	—	1	—	23	18	1	5	14	30	530	10	91
SOUTH ATLANTIC .....	1	8	45	685	1,273	5	92	122	287	3,745	131	1,220
Delaware .....	—	—	—	4	6	—	—	1	7	184	—	3
Maryland .....	—	—	—	—	10	—	15	22	33	406	—	8
District of Columbia .....	—	—	—	—	—	—	1	4	1	15	—	2
Virginia .....	—	4	5	337	34	4	15	30	40	339	43	333
West Virginia .....	—	—	3	113	137	—	1	6	81	1,319	7	124
North Carolina .....	—	1	—	6	25	1	19	19	NN	NN	25	137
South Carolina .....	—	1	4	33	162	—	7	10	36	240	1	59
Georgia .....	—	—	5	18	122	—	16	2	1	11	—	6
Florida .....	1	2	28	174	777	—	18	28	88	1,231	55	548
EAST SOUTH CENTRAL .....	1	2	34	413	819	7	55	45	52	2,085	38	722
Kentucky .....	—	—	32	302	446	1	23	12	9	696	4	321
Tennessee .....	—	—	1	84	140	1	19	18	42	738	20	259
Alabama .....	1	2	—	—	101	5	9	9	—	235	2	47
Mississippi .....	—	—	1	27	132	—	4	6	1	416	12	95
WEST SOUTH CENTRAL .....	—	7	21	421	861	3	84	69	119	2,155	76	990
Arkansas *	—	—	—	25	7	—	8	7	7	152	2	92
Louisiana .....	—	1	4	53	37	1	17	19	2	47	—	67
Oklahoma .....	—	1	—	17	6	—	7	6	26	211	5	104
Texas .....	—	5	17	326	811	2	52	37	84	1,745	69	727
MOUNTAIN .....	1	7	24	356	962	—	11	11	118	1,673	199	1,738
Montana .....	—	1	—	12	12	—	2	2	7	142	23	363
Idaho .....	—	—	4	153	7	—	1	2	—	99	2	13
Wyoming .....	—	—	—	10	—	—	—	1	40	363	—	5
Colorado .....	1	1	16	84	323	—	2	2	27	198	171	1,159
New Mexico .....	—	1	4	86	64	—	1	1	44	672	2	122
Arizona *	—	4	—	10	428	—	2	1	—	140	—	14
Utah .....	—	—	—	1	128	—	1	1	—	52	—	59
Nevada .....	—	—	—	—	—	—	2	1	—	7	1	3
PACIFIC .....	—	19	63	982	2,454	6	95	102	370	5,257	195	2,160
Washington .....	—	—	33	391	506	—	7	11	32	635	18	340
Oregon .....	—	1	17	256	25	—	7	6	120	1,057	26	262
California .....	—	15	13	328	1,849	6	78	82	178	3,039	148	1,544
Alaska .....	—	2	—	—	5	—	3	—	23	403	—	1
Hawaii .....	—	1	—	7	69	—	—	3	17	123	3	13
Guam .....	—	—	—	3	2	—	—	6	—	1	—	2
Puerto Rico .....	—	—	74	844	245	—	4	2	9	289	—	16
Virgin Islands .....	—	—	—	1	1	—	—	2	—	7	—	1

\*Delayed reports: Measles: N.H. 11, N.J. delete 1, Ark. 2, Ariz. 1

Mumps: Me. 11, Ark. 13

Rubella: N.H. 1, N.J. 297, Ark. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING APRIL 21, 1973 AND APRIL 22, 1972 (16th WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES . . . . .	19	694	9,553	20	8	289	2	13	13,635	483	77	1,071
NEW ENGLAND . . . . .	1	28	323	—	—	3	—	1	366	11	2	64
Maine . . . . .	—	2	26	—	—	—	—	—	18	—	—	40
New Hampshire . . . . .	—	1	19	—	—	—	—	—	21	—	2	22
Vermont . . . . .	—	—	8	—	—	—	—	—	1	—	—	1
Massachusetts . . . . .	—	16	175	—	—	3	—	1	187	10	—	1
Rhode Island . . . . .	1	3	26	—	—	—	—	—	25	—	—	—
Connecticut . . . . .	—	6	69	—	—	—	—	—	114	1	—	—
MIDDLE ATLANTIC . . . . .	4	163	2,027	—	—	20	—	1	1,512	98	1	6
Upstate New York . . . . .	—	27	379	—	—	3	—	—	256	9	1	3
New York City . . . . .	2	69	752	—	—	7	—	—	792	64	—	—
New Jersey . . . . .	2	25	373	—	—	6	—	—	91	20	—	—
Pennsylvania . . . . .	—	42	523	—	—	4	—	1	373	5	—	3
EAST NORTH CENTRAL . . . . .	3	106	1,476	—	—	11	—	—	1,514	19	5	107
Ohio* . . . . .	1	16	472	—	—	5	—	—	490	5	—	15
Indiana . . . . .	—	7	199	—	—	—	—	—	69	3	2	32
Illinois . . . . .	1	56	433	—	—	1	—	—	258	2	3	30
Michigan . . . . .	—	27	315	—	—	3	—	—	542	8	—	1
Wisconsin . . . . .	1	—	57	—	—	2	—	—	155	1	—	29
WEST NORTH CENTRAL . . . . .	3	34	362	2	1	8	—	1	898	14	32	302
Minnesota . . . . .	—	4	45	—	1	3	—	—	108	6	13	96
Iowa . . . . .	—	2	39	—	—	—	—	—	178	1	8	78
Missouri . . . . .	3	18	176	2	—	3	—	1	340	6	3	28
North Dakota . . . . .	—	1	10	—	—	—	—	—	16	—	1	47
South Dakota * . . . . .	—	4	25	—	—	1	—	—	43	—	1	29
Nebraska . . . . .	—	3	28	—	—	1	—	—	124	—	—	1
Kansas * . . . . .	—	2	39	—	—	—	—	—	89	1	6	23
SOUTH ATLANTIC . . . . .	4	114	1,818	5	5	208	—	5	3,719	178	7	93
Delaware . . . . .	—	3	20	—	—	—	—	1	21	2	—	—
Maryland . . . . .	—	11	182	—	1	2	—	—	302	16	—	4
District of Columbia . . . . .	—	8	100	—	—	—	—	—	326	13	—	—
Virginia . . . . .	—	13	240	2	—	—	—	—	432	55	1	35
West Virginia . . . . .	—	7	100	—	—	—	—	—	31	—	1	10
North Carolina * . . . . .	—	12	297	1	—	2	—	2	770	9	—	—
South Carolina . . . . .	—	8	184	—	—	1	—	—	253	16	—	—
Georgia . . . . .	—	19	309	2	—	1	—	2	715	19	3	30
Florida . . . . .	4	33	386	—	4	202	—	—	869	48	2	14
EAST SOUTH CENTRAL . . . . .	2	46	826	5	—	2	—	3	868	36	5	236
Kentucky . . . . .	—	17	215	1	—	1	—	—	146	21	—	119
Tennessee . . . . .	1	5	233	3	—	—	—	1	213	6	5	87
Alabama . . . . .	1	11	225	—	—	1	—	2	261	2	—	30
Mississippi . . . . .	—	13	153	1	—	—	—	—	248	7	—	—
WEST SOUTH CENTRAL . . . . .	1	76	963	8	—	4	2	2	1,955	47	23	184
Arkansas . . . . .	—	6	102	2	—	—	—	—	171	1	—	43
Louisiana . . . . .	1	7	180	—	—	—	—	—	395	13	—	12
Oklahoma . . . . .	—	10	85	4	—	1	2	2	405	6	12	57
Texas . . . . .	—	53	596	2	—	3	—	—	984	27	11	72
MOUNTAIN . . . . .	—	16	297	—	—	2	—	—	543	25	—	5
Montana . . . . .	—	—	7	—	—	—	—	—	20	—	—	—
Idaho . . . . .	—	—	10	—	—	—	—	—	34	—	—	—
Wyoming . . . . .	—	—	10	—	—	—	—	—	5	—	—	—
Colorado . . . . .	—	4	58	—	—	—	—	—	140	5	—	—
New Mexico . . . . .	—	2	73	—	—	1	—	—	67	—	—	—
Arizona * . . . . .	—	—	105	—	—	1	—	—	171	4	—	5
Utah . . . . .	—	—	10	—	—	—	—	—	20	1	—	—
Nevada . . . . .	—	10	24	—	—	—	—	—	86	15	—	—
PACIFIC . . . . .	1	111	1,461	—	2	31	—	—	2,260	55	2	74
Washington . . . . .	—	5	122	—	—	—	—	—	185	1	—	—
Oregon . . . . .	—	8	73	—	—	2	—	—	93	—	—	—
California . . . . .	1	82	1,139	—	2	29	—	—	1,914	51	2	71
Alaska . . . . .	—	—	36	—	—	—	—	—	51	1	—	3
Hawaii . . . . .	—	16	91	—	—	—	—	—	17	2	—	—
Guam . . . . .	—	—	5	—	—	—	—	—	—	—	—	—
Puerto Rico . . . . .	3	10	161	—	—	1	—	—	48	5	—	13
Virgin Islands . . . . .	—	—	—	—	—	—	—	—	1	—	—	—

\*Delayed reports: TB: Ohio delete 1, Kans. delete 3, N.C. delete 3  
Gonorrhea: Ariz. 97Syphilis: Ohio delete 1, Ariz. 3  
Rabies: S. Dak. 25, Ariz. 1

## Morbidity and Mortality Weekly Report

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING APRIL 21, 1973

Week No.

16

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	663	430	23	29	SOUTH ATLANTIC	1,257	682	47	42
Boston, Mass.	207	117	12	13	Atlanta, Ga.	160	77	2	8
Bridgeport, Conn.	46	25	2	2	Baltimore, Md.	218	120	11	3
Cambridge, Mass.	23	16	1	1	Charlotte, N. C.	62	27	2	—
Fall River, Mass.	34	22	—	—	Jacksonville, Fla.	90	53	5	2
Hartford, Conn.	53	33	2	—	Miami, Fla.	121	71	4	1
Lowell, Mass.	22	16	—	—	Norfolk, Va.	51	19	1	6
Lynn, Mass.	18	12	—	—	Richmond, Va.	99	48	4	6
New Bedford, Mass.	24	21	1	—	Savannah, Ga.	43	22	5	—
New Haven, Conn.	35	22	1	—	St. Petersburg, Fla.	84	67	1	2
Providence, R. I.	56	33	3	3	Tampa, Fla.	75	50	3	5
Somerville, Mass.	10	7	—	—	Washington, D. C.	206	101	6	8
Springfield, Mass.	56	45	1	7	Wilmington, Del.	48	27	3	1
Waterbury, Conn.	25	18	—	—	EAST SOUTH CENTRAL	837	455	37	43
Worcester, Mass.	54	43	—	3	Birmingham, Ala.	132	71	6	3
MIDDLE ATLANTIC	2,883	1,763	79	114	Chattanooga, Tenn.	61	41	—	7
Albany, N. Y.	60	36	3	—	Knoxville, Tenn.	30	17	—	2
Allentown, Pa.	33	24	1	3	Louisville, Ky.	216	115	14	14
Buffalo, N. Y.	128	68	4	11	Memphis, Tenn.	154	87	10	3
Camden, N. J.	46	26	2	1	Mobile, Ala.	70	33	2	—
Elizabeth, N. J.	34	16	—	1	Montgomery, Ala.	57	29	3	5
Erie, Pa.	36	20	1	3	Nashville, Tenn.	117	62	2	9
Jersey City, N. J.	50	31	—	—	WEST SOUTH CENTRAL	1,118	604	55	44
Newark, N. J.	77	49	1	8	Austin, Tex.	44	26	1	3
New York City, N. Y. †	1,524	943	37	47	Baton Rouge, La.	34	23	1	1
Paterson, N. J.	32	16	3	2	Corpus Christi, Tex.	30	17	—	1
Philadelphia, Pa.	296	169	14	3	Dallas, Tex.	147	73	3	4
Pittsburgh, Pa.	192	101	7	16	El Paso, Tex.	42	16	4	4
Reading, Pa.	39	32	—	3	Fort Worth, Tex.	79	46	5	2
Rochester, N. Y.	125	90	1	7	Houston, Tex.	224	110	10	6
Schenectady, N. Y.	23	15	1	—	Little Rock, Ark.	65	25	9	7
Scranton, Pa.	34	24	1	—	New Orleans, La.	118	58	5	1
Syracuse, N. Y.	73	49	2	1	Oklahoma City, Okla. *	78	45	4	2
Trenton, N. J.	24	14	—	3	San Antonio, Tex.	150	97	6	3
Utica, N. Y.	21	16	—	2	Shreveport, La.	53	33	2	1
Yonkers, N. Y.	36	24	1	3	Tulsa, Okla.	54	35	5	9
EAST NORTH CENTRAL	2,631	1,488	111	98	MOUNTAIN	563	328	29	35
Akron, Ohio	74	46	3	—	Albuquerque, N. Mex.	58	31	2	10
Canton, Ohio	50	28	2	2	Colorado Springs, Colo.	23	16	—	2
Chicago, Ill.	752	405	35	21	Denver, Colo.	147	91	10	13
Cincinnati, Ohio	178	104	7	4	Las Vegas, Nev.	31	14	5	1
Cleveland, Ohio	158	82	3	1	Ogden, Utah	20	9	—	—
Columbus, Ohio	129	72	4	8	Phoenix, Ariz.	119	67	4	4
Dayton, Ohio	72	38	3	2	Pueblo, Colo.	27	15	3	1
Detroit, Mich.	342	206	10	10	Salt Lake City, Utah	66	42	4	1
Evansville, Ind.	47	34	1	—	Tucson, Ariz.	72	43	1	3
Fort Wayne, Ind.	43	21	5	4	PACIFIC	1,631	994	45	34
Gary, Ind.	35	16	2	2	Berkeley, Calif.	16	14	—	—
Grand Rapids, Mich.	54	32	2	5	Fresno, Calif.	50	31	3	—
Indianapolis, Ind.	154	81	10	6	Glendale, Calif.	33	24	1	—
Madison, Wis.	54	25	8	6	Honolulu, Hawaii	45	26	1	2
Milwaukee, Wis.	155	94	—	4	Long Beach, Calif.	100	55	3	3
Peoria, Ill.	38	24	2	4	Los Angeles, Calif.	503	307	11	9
Rockford, Ill.	39	18	2	6	Oakland, Calif.	77	42	5	3
South Bend, Ind.	41	25	4	6	Pasadena, Calif.	34	23	1	1
Toledo, Ohio	153	96	6	5	Portland, Oreg.	140	98	4	—
Youngstown, Ohio	63	41	2	2	Sacramento, Calif.	59	35	1	—
WEST NORTH CENTRAL	801	516	38	31	San Diego, Calif.	124	74	2	4
Des Moines, Iowa	80	52	1	1	San Francisco, Calif.	176	96	5	5
Duluth, Minn.	33	23	1	3	San Jose, Calif.	54	34	2	—
Kansas City, Kans.	35	22	1	1	Seattle, Wash.	135	76	2	6
Kansas City, Mo.	113	78	3	1	Spokane, Wash.	53	40	3	1
Lincoln, Nebr.	27	14	1	1	Tacoma, Wash.	32	19	1	—
Minneapolis, Minn.	82	48	8	—	Total	12,384	7,260	464	470
Omaha, Nebr.	78	45	8	2	Expected Number	12,795	7,380	533	473
St. Louis, Mo.	230	144	9	12	Cumulative Total (includes reported corrections for previous weeks)	219,900	131,190	7,999	10,887
St. Paul, Minn.	56	40	2	—					
Wichita, Kans.	67	50	4	10					

†Delayed report for week ending April 14, 1973.

\*Estimate based on average percent of divisional total.

EPIDEMIOLOGIC NOTES AND REPORTS  
STAPHYLOCOCCAL FOODBORNE DISEASE — Tennessee

On March 2, 1973, 2 cases of probable foodborne illness were reported to the Chattanooga-Hamilton County Health Department from the emergency room of a local hospital. The patients were employed by a local news publisher and had eaten lunch in the publisher's cafeteria. Subsequent investigation revealed that 96 of 137 persons eating lunch in the cafeteria became ill; 49 visited local hospitals or clinics, and 9 consulted private physicians. Eight were hospitalized for 1-3 days. Predominant symptoms were nausea (75%), abdominal cramps (72%), diarrhea (70%), vomiting (60%), and fever (50%). The median incubation period was 3 1/2 hours, range 1/2–5 1/2 hours (Figure 3).

The noon meal had consisted of hamburgers, baked beans, potato salad, and assorted beverages. Frankfurters were available, but none were consumed until the supply of hamburgers ran out at approximately 1:30 p.m. Food history questionnaires implicated the potato salad as the probable vehicle of infection (Table 1).

Laboratory analysis on available food revealed the following: potato salad— $4.3 \times 10^7$  coagulase-positive staphy-

Figure 3

48 CASES OF GASTROENTERITIS, BY INCUBATION PERIOD  
CHATTANOOGA, TENNESSEE — MARCH 2, 1973

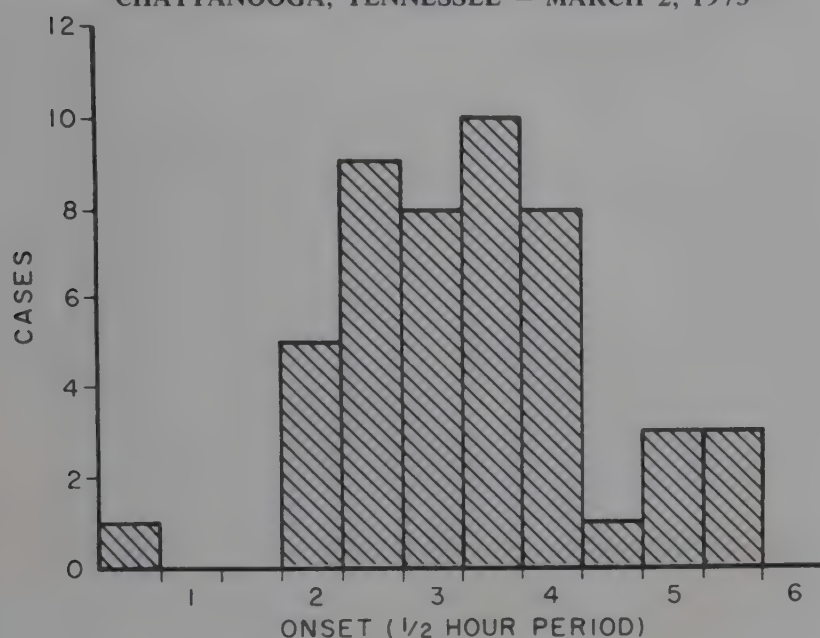


Table 1  
Food-Specific Attack Rates  
Chattanooga, Tennessee — March 2, 1973

Food Item	Ate				Did Not Eat			
	Ill	Not Ill	Total	Attack Rate (Percent)	Ill	Not Ill	Total	Attack Rate (Percent)
Potato Salad	88	12	100	88	5	28	33	15*
Hamburger	90	36	126	71	16	15	31	51
Baked Beans	76	23	99	77	5	5	10	50
Milk	34	21	55	62	48	23	71	68

\*significant,  $p < .001$  by Chi Square

lococci per gm; frankfurters—7,500 coagulase-positive staphylococci per gm. Baked beans and mayonnaise were negative. None of the hamburger remained for examination.

Further investigation revealed that the potatoes used in the incriminated potato salad had been peeled and boiled the day before the outbreak by a cook who had a suppurative cut on her right forefinger. The potatoes were then stored at room temperature overnight.

(Reported by R. L. Jensen, M.D., Memorial Hospital, Chattanooga; H. G. Lewis, Environmentalist, H. V. Yinger, Jr., Director, Division of Health Statistics, F. W. Failing, D.V.M., Director, Division of Environmental Health, J. M. Foley, M.D., Deputy Director, and M. M. Young, M.D., Director, Chattanooga-Hamilton County Health Department; Lester Smith, Director, Branch Laboratory, and Robert H. Hutcheson, Jr., M.D., State Epidemiologist, Tennessee Department of Public Health; and an EIS Officer.)

#### Editorial Note

The clinical and epidemiologic features of this outbreak were compatible with staphylococcal foodborne disease. As in most outbreaks of this illness, the incriminated vehicle, in this instance, potato salad, was held at an improper storage temperature for a long period of time, permitting the multiplication of staphylococcal organisms and the elaboration of enterotoxin. Phage typing, quantification of staphylococci, and detection of enterotoxin in food are the best laboratory tests for confirmation of staphylococcal foodborne disease.

#### SURVEILLANCE SUMMARY ARTHROPOD-BORNE VIRUS DISEASES — California, 1972-73

Extensive surveillance to detect the possible introduction of Venezuelan equine encephalitis (VEE) virus into California and to monitor activity of the known endemic arboviruses, western encephalitis (WEE) and St. Louis encephalitis (SLE), was carried out in California in 1972. The Department of Public Health collaborated with physicians, veterinarians, mosquito abatement districts, and county, state, and federal agencies in this activity. At least 851 persons were screened serologically by the State Viral and Rickettsial Disease Laboratory or by the 4 county Public Health Laboratories which also perform arbovirus testing. There were 2 human cases of VEE: in a 22-year-old man from Santa Cruz (onset August 9) and an entomologist from Los Angeles (August 24), both exposed in Mexico. There were 5 cases of SLE: in a

25-year-old man from San Diego County (July 14) who could have been infected in California, Arizona, Peru, or Brazil; an 11-year-old boy from Tehama County (September 13); a 25-year-old man from Yolo County (September 14); a 55-year-old man from Tulare County (September 22); and a 17-year-old boy from Kern County (October 5). There were 3 cases of WEE: in a 4-month-old girl from Madera County (September 8) and a 14-year-old boy (September 8) and a 35-year-old man (September 10) from Fresno County. All cases recovered, and no serious sequelae were reported. Cases were confirmed serologically by complement fixation, hemagglutination inhibition, neutralization, and indirect fluorescent antibody tests. In addition, 3 cases of dengue were detected: in a 20-year-old woman from Santa Cruz, exposed in Samoa

## ARTHROPOD-BORNE DISEASES — Continued

(January 13, 1972); a 50-year-old woman from Marin County, exposed in Haiti (January 19, 1972); and a 29-year-old woman from Los Angeles, exposed in Southeast Asia (July 27).

Sixty-eight clinically suspect cases of encephalitis in equines were reported in 1972, but definitive diagnosis by serologic tests was difficult because of the extensive immunization program in equines. Only 1 case of WEE could be confirmed. Brain or other tissue samples from 31 equines and over 115 other domestic or wild animals were tested for viruses with negative results. A total of 6,336 mosquito pools (over 194,737 mosquitoes) were tested and yielded 180 viruses. Collections were made from 30 counties throughout the year, but most were done between May and November. The viruses isolated included SLE (64), WEE (42), Turlock (48), and 26 others as yet unidentified. Although VEE virus activity spread northward up the west coast of Mexico in

1972, there was no evidence that it reached California in equines or wildlife.

A similar surveillance program is in progress during 1973 because the introduction of VEE remains a threat, WEE and SLE are still widely endemic, the human population is presumably highly susceptible, and excess water affording extensive mosquito breeding sites is expected for the spring and summer. Mosquito control continues to be hampered in many areas by the resistance of vectors to available insecticides. An efficient surveillance system, ecologically sound vector control methods, and a better understanding of how to predict and prevent arbovirus disease epidemics are continuing high priority needs.

(Reported by the Bureau of Communicable Disease Control, California Department of Public Health: California Morbidity, No. 12, March 30, 1973.)

### CURRENT TRENDS ZOSTER IMMUNE GLOBULIN PROGRAM — United States

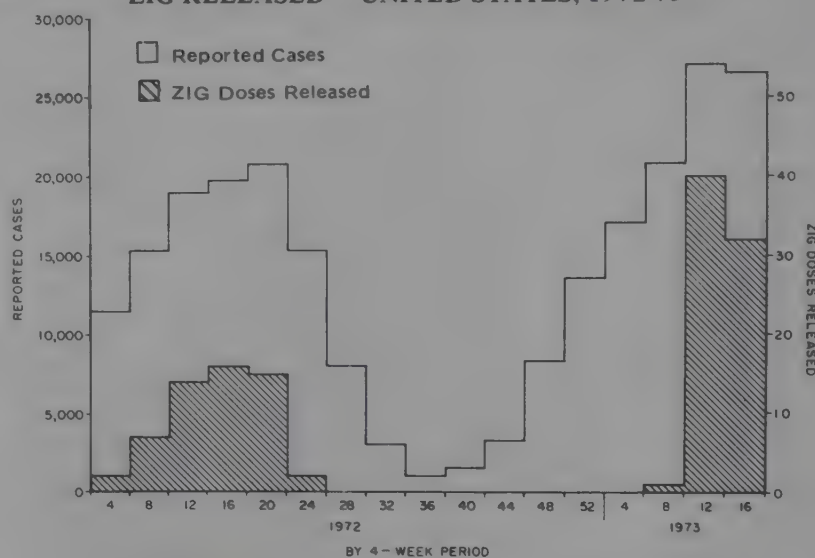
Since zoster immune globulin (ZIG) again became available from CDC in late February 1973 (MMWR, Vol. 22, No. 7), 73 high-risk children have received the drug after exposure to active varicella. A total of 56 children were treated in 1972 (Figure 4).

Varicella became a nationally notifiable disease in 1972, and a total of 140,627 cases were reported to CDC that year. In the 1st 15 weeks of 1973, 84,736 cases were reported, a 42% increase over the comparable period in 1972.

The requirements for release of ZIG for treatment include: 1) history of susceptibility to varicella, 2) close exposure to active varicella within preceding 72 hours, and 3) presence of high-risk disease or predisposing condition (leukemia or lymphoma, immunodeficiency syndrome, or treatment with immunosuppressive medication). Adults are not eligible for ZIG prophylaxis.

Although ZIG availability has been increased this year due to a larger supply of zoster immune plasma, the supply of ZIG is rapidly approaching exhaustion. Physicians with patients convalescing from varicella or herpes zoster who are willing to donate plasma to the ZIG program should contact the Immunization Branch, CDC, for further information.

Figure 4  
REPORTED CASES OF VARICELLA AND DOSES OF  
ZIG RELEASED — UNITED STATES, 1972-73



be demonstrated in several hamburger samples taken from the family freezer.

Further investigation has revealed no other related cases in Vermont or the New England area.

(Reported by Anthony Robbins, M.D., Commissioner, M. Geoffrey Smith, M.D., Director, Communicable Disease Con-

trol, Dymitry Pomar, D.V.M., Director of Laboratories, Vermont Department of Health; A. E. Janawicz, D.V.M., State Veterinarian, Vermont Department of Agriculture; Robert Greenberg, M.D., and Frederick Appleton, M.D., Dartmouth-Hitchcock Affiliated Hospitals, Hanover, New Hampshire; and 2 EIS Officers.)

### SUMMARY OF REPORTED CASES OF INFECTIOUS SYPHILIS

CASES OF PRIMARY AND SECONDARY SYPHILIS: By Reporting Area — March 1973 and March 1972 — Provisional Data

Reporting Area	March		Cumulative Jan. — Mar.		Reporting Area	March		Cumulative Jan. — Mar.	
	1973	1972	1973	1972		1973	1972	1973	1972
<b>NEW ENGLAND</b> .....	97	79	309	220	<b>EAST SOUTH CENTRAL</b> .....	130	123	365	335
Maine .....	4	2	8	5	Kentucky .....	32	25	108	50
New Hampshire .....	1	3	5	3	Tennessee .....	44	36	104	138
Vermont .....	1	3	7	3	Alabama .....	10	11	32	39
Massachusetts .....	69	40	216	114	Mississippi .....	44	51	121	108
Rhode Island .....	3	6	7	10	<b>WEST SOUTH CENTRAL</b> .....	196	267	661	771
Connecticut .....	19	25	66	85	Arkansas .....	23	22	52	73
<b>MIDDLE ATLANTIC</b> .....	561	512	1,528	1,374	Louisiana .....	45	88	184	204
Upstate New York .....	33	41	106	111	Oklahoma .....	15	15	52	30
New York City .....	349	359	969	925	Texas .....	113	142	373	464
Pa. (Excl. Phila.) .....	28	18	74	46	<b>MOUNTAIN</b> .....	52	51	167	118
Philadelphia .....	46	32	119	87	Montana .....	—	—	—	1
New Jersey .....	105	62	260	205	Idaho .....	3	—	5	1
<b>EAST NORTH CENTRAL</b> .....	206	236	594	680	Wyoming .....	2	2	2	5
Ohio .....	25	44	72	92	Colorado .....	18	8	68	12
Indiana .....	22	19	74	44	New Mexico .....	8	9	23	29
Downstate Illinois .....	15	17	53	45	Arizona .....	12	20	49	49
Chicago .....	86	82	228	271	Utah .....	4	6	6	7
Michigan .....	50	71	141	219	Nevada .....	5	6	14	14
Wisconsin .....	8	3	26	9	<b>PACIFIC</b> .....	389	306	1,126	843
<b>WEST NORTH CENTRAL</b> .....	27	26	76	71	Washington .....	10	12	41	27
Minnesota .....	10	1	27	6	Oregon .....	6	3	16	11
Iowa .....	4	8	8	10	California .....	364	288	1,046	794
Missouri .....	10	10	26	38	Alaska .....	2	3	5	4
North Dakota .....	1	—	1	—	Hawaii .....	7	—	18	7
South Dakota .....	—	—	1	—	<b>U.S. TOTAL</b> .....	2,270	2,157	6,490	5,957
Nebraska .....	—	2	1	5	<b>TERRITORIES</b> .....	70	85	213	224
Kansas .....	2	5	12	12	Puerto Rico .....	68	76	204	203
<b>SOUTH ATLANTIC</b> .....	612	557	1,664	1,545	Virgin Islands .....	2	9	9	21
Delaware .....	5	8	20	16	Note: Cumulative Totals include revised and delayed reports through previous months.				
Maryland .....	53	87	196	226					
District of Columbia .....	64	72	191	199					
Virginia .....	71	37	183	103					
West Virginia .....	3	5	5	7					
North Carolina .....	52	55	163	138					
South Carolina .....	71	33	179	124					
Georgia .....	112	89	298	355					
Florida .....	181	171	429	377					

### EPIDEMIOLOGIC NOTES AND REPORTS PARALYTIC DISEASE — Puerto Rico

Between October 9, 1972, and January 6, 1973, 13 cases of paralytic disease were recognized in Puerto Rican children between the ages of 1 and 8. Almost half the patients became ill in November, and 11 were hospitalized. Seven cases occurred in residents of the greater San Juan area, 3 were from other towns in the northeastern region, and 3 were from the city of Ponce in the southern part of the island. The sex distribution showed a male to female case ratio of 7:6.

Fever lasting 1-8 (median 4) days was seen in all 13 cases and was the only associated complaint in 1 case. Severe pain in the paralyzed extremity was reported in 8 cases, half of whom also had pain in the contralateral extremity; sore throat and cough were noted in 7 cases. Sensory loss in the area affected by paralysis was recorded in 4 cases; in 3 it was temporary, while in 1 case, residual sensory loss was encoun-

tered on reexamination 60 days after onset. In 3 cases, a generalized macular rash was described.

Paralysis developed 0-5 (median 1) days after the onset of 1st symptoms and was asymmetric in 12 of the 13 cases. Isolated involvement of a single limb occurred in 8 cases, with 7 of these limited to a lower extremity. One of the latter also demonstrated motor incoordination.

Residual muscular atrophy of the affected extremity was observed in 6 cases, all 60 days or longer after onset. In 5 of these, atrophy was limited to a single lower extremity, while in the other both legs were affected. Residual neurologic dysfunction was observed in 9 cases.

Polio vaccination histories were obtained for all patients. Eleven of 12 gave a history of immunization with 1 or more doses of oral poliovaccine (OPV), and the other had received a single dose of inactivated poliovaccine. In 6 cases, a history

**PARALYTIC DISEASE – Continued**

of complete immunization with 3 or more doses of OPV was given. In 10 cases for whom the data was available, the median duration from last vaccination to onset of illness was 1.5 years (range 1 month-6 years).

Virus isolation was attempted in all cases of paralysis. Rectal swabs performed 8-90 (mean 47.3) days after onset of illness were all negative for enterovirus by tissue culture and mouse inoculation. Throat swabs and cerebrospinal fluid collected from 2 patients during the acute phase of illness also failed to yield enterovirus. Throat and rectal swabs collected from 3 family members of 1 case, 2 of whom had mild febrile illnesses at the time, were negative as well. Of the 9 sera tested for complement fixation (CF) antibody, titers to all 3 types of poliovirus were uniformly low or absent, with the highest 1:16. Almost half (5) had no detectable polio CF antibody at a 1:8 serum dilution. Polio neutralizing antibody titers were low to medium in all cases, consistent with the vaccination histories. The highest neutralizing antibody titer seen was 1:160 against polio types 1 and 3. In the case with no history of polio vaccination, neutralizing antibody titers were 1:20, 1:5, and <1:5 to poliovirus types 1, 2, and 3, respectively, with no demonstrable CF antibody.

Serologic studies for all 6 types of coxsackie B viruses and for group A and B arboviruses were also unremarkable. Results of serologic tests for measles, mumps, herpes simplex, and selected coxsackie A and echovirus types are pending.

No history of direct contact between cases was elicited. The only indirect relationship established was between 2 children who lived within a block of each other and who developed illness 22 days apart.

There was no history of ingestion of toxins or drugs other than commonly prescribed medications. There also was no preceding acute illness in any of the cases during the month

prior to onset nor history of any unusual or unexplained neurologic illness in other family members.

(Reported by Luis E. Mainardi, M.D., Chief, Communicable Disease Control Program, Puerto Rico Health Department; the Hepatitis and Enteric Virology Section, and the Arbovirology Section, Virology Branch, Laboratory Division, CDC; and 2 EIS Officers.)

**Editorial Note**

Although the disease described in this outbreak was clinically indistinguishable from paralytic poliomyelitis, available evidence failed to incriminate any type of poliovirus, and the etiologic agent remains unidentified. The febrile illness associated with all cases strongly suggested an infectious process, and clinical and epidemiologic features were most compatible with a viral etiology. Various enteroviruses other than polio have been implicated in prior cases of sporadic acute paralysis, usually in context with outbreaks of a more characteristic clinical syndrome, particularly aseptic meningitis. Among these agents, coxsackievirus A7 has emerged as the leading cause of paralysis, and with the exception of the polioviruses, it is the only enterovirus documented to have caused epidemic paralytic disease involving more than 3 people (1,2). The paralysis associated with these enteroviral infections is generally considered milder than that seen with the polioviruses, resulting in a lower frequency of neurologic sequelae. However, permanent residual impairment has been reported following infection with several of these agents.

Reporting to CDC of future similar cases of non-polio paralysis is encouraged as a means to define the extent of occurrence and clarify the nature of such phenomena.

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1. Poliomyelitis-like disease in 1959 – A combined Scottish study. *Brit Med J* 2:597-605, 1961
2. Voroshilova MK, Chumakov MP: Poliomyelitis-like properties of AB-IV-coxsackie A7 group of viruses. *Progr Med Virol* 2:106-170, 1959

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

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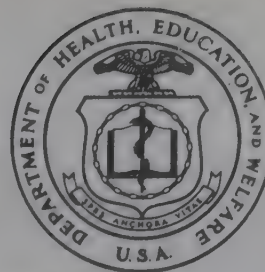
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# Morbidity and Mortality



U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

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## EPIDEMIOLOGIC NOTES AND REPORTS RUBELLA VACCINATION AND PREGNANCY

In order to assess the teratogenic potential of rubella vaccine, CDC maintains surveillance of women vaccinated shortly before or after conception. Since licensure of the vaccine in June 1969, 242 cases of rubella have been reported. Thirty-four (14%) of these women had rubella hemagglutination-inhibition tests showing them to be susceptible at the time of vaccination. Seven women proved to be immune by testing immediately after vaccination, while the remaining 201 women were of unknown immunity status.

The outcome of these pregnancies is shown in Table 1. None of the 111 live-born infants had any evidence, clinically or serologically, of congenital viral infection. Whenever possible, the products of conception obtained from therapeutic abortions were studied virologically. In 8 cases, rubella vaccine-like virus was isolated; 4 isolates were from fetal tissues and 4 others were from placenta or decidua (Table 2). Since the

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adequacy of handling and shipping of several specimens submitted to CDC is unknown, the frequency with which fetal infection occurs cannot be determined.

Because the number of susceptible women who have gone to term following vaccination is small (17), the teratogenicity of rubella vaccine remains unknown, even though all live-born infants have been normal to date. However, it is clear that attenuated rubella virus can infect fetal tissues.

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	17th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 17 WEEKS		
	April 28, 1973	April 29, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	34	28	32	621	552	490
Brucellosis	9	6	6	42	42	44
Chickenpox	5,921	5,053	---	96,538	70,713	---
Diphtheria	—	5	3	65	38	61
Encephalitis, primary:						
Arthropod-borne and unspecified	27	23	24	321	272	333
Encephalitis, post-infectious	8	7	9	75	91	102
Hepatitis, serum (Hepatitis B)	142	177	134	2,424	3,136	2,218
Hepatitis, infectious (Hepatitis A)	1,049	1,083	1,083	16,745	18,734	18,500
Malaria	2	14	47	72	447	800
Measles (rubeola)	1,055	1,200	1,200	14,186	15,345	15,345
Meningococcal infections, total	34	23	48	574	571	1,157
Civilian	34	22	47	559	545	1,036
Military	—	1	4	15	26	123
Mumps	2,269	2,341	2,952	34,243	36,320	46,055
Rubella (German measles)	1,558	1,282	1,965	15,956	12,763	23,353
Tetanus	4	—	1	23	24	28
Tuberculosis, new active	683	722	---	10,253	10,596	---
Tularemia	—	2	2	19	36	30
Typhoid fever	7	4	5	296	82	78
Typhus, tick-borne (Rky. Mt. spotted fever)	2	—	2	15	21	8
Venereal Diseases:						
Gonorrhea	16,085	13,260	---	247,227	220,406	---
Syphilis, primary and secondary	540	535	---	8,849	7,727	---
Rabies in animals	83	105	76	1,155	1,474	1,319

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	—
Botulism:	—	Paralytic:	—
Congenital rubella syndrome:	7	Psittacosis:	3
Leprosy: Calif. - 1, Tex. - 1	40	Rabies in man:	—
Leptospirosis: Ohio - 1	11	Trichinosis: Conn. - 1	32
Plague:	—	Typhus, murine:	6

## RUBELLA — Continued

The recommendations of the Advisory Committee on Immunization Practices that only susceptible non-pregnant women be vaccinated and that these women avoid pregnancy for 2 months following vaccination remain valid.

CDC is continuing its surveillance of women vaccinated during pregnancy and urges that all cases be reported.

Table 1  
Outcome of Pregnancies in Women Receiving Rubella Vaccine Shortly Before or After Conception

Pre-vaccination Immunity Status	Number of Cases	Outcome of Pregnancy		
		Abortion		Delivery of Live Infant
		Therapeutic	Spontaneous	
Susceptible	34	14	3	17
Immune	7	0	0	7
Unknown	201	100	14	87
Total	242	114	17	111

Table 2  
Characteristics of Patients with Rubella Vaccine-Like Virus Isolated from Therapeutic Abortion Specimens

Pre-vaccination Immunity Status	Gestation at Abortion (Weeks)	Interval Between Vaccination and Abortion (Weeks)	Tissues Positive for Rubella Virus
Unknown	14	16	Fetal eye, placenta
Unknown	13	2	Fetal kidney, placenta
Susceptible	6	8	Placenta
Susceptible	8	5	Decidua
Unknown	10½	9½	Decidua, placenta
Susceptible	13½	4	Placenta
Susceptible	13	20	Fetal eye
Susceptible	18	12	Fetal bone marrow

(Reported by the Field Services Branch, Epidemiology Program, and the Immunization Branch, State and Community Services Division, CDC.)

### SURVEILLANCE SUMMARY MEASLES — United States, 1st 16 Weeks 1973

A total of 13,006 cases of measles were reported in the 1st 16 weeks of 1973, an 8% decrease in the number of reported cases for the comparable period in 1972. In contrast, a 63% reduction in reported cases was noted during this period in 1972 when compared with the 1st 16 weeks of 1971 (Figure 1).

Regionally, the New England and Middle Atlantic areas, which together accounted for 43% of all reported cases in 1973, were the only ones noting an increase in cases this year over last year's figure. When reported cases are analyzed by individual reporting area, 20 states, Puerto Rico, and Guam show more cases for this period in 1973 than for the similar period in 1972. In the 1st 16 weeks of 1973, Idaho, Massachusetts, New Hampshire, New York, Oregon, Pennsylvania, Virginia, and Wyoming experienced the largest percentage increases in reported cases.

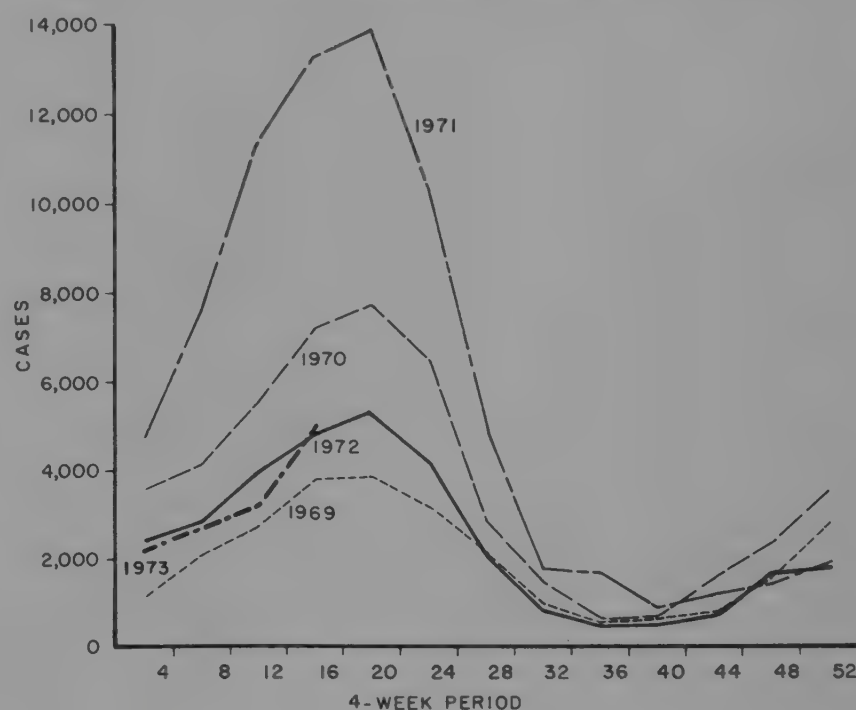
Incidence rates (per 100,000 population under 18 years of age) for the 1st 16 weeks of 1973 were highest in New Hampshire (236.2), Massachusetts (138.3), Connecticut (100.4), Rhode Island (100.0), Puerto Rico (80.7), and Michigan (65.3). Alabama, Alaska, Maryland, Nevada, South Dakota, and the District of Columbia have reported no cases in 1973.

(Reported by the Field Services Branch, Epidemiology Program, and the Immunization Branch, State and Community Services Division, CDC.)

#### Editorial Note

Without more intensive immunization efforts during the

Figure 1  
REPORTED CASES OF MEASLES, BY 4-WEEK PERIODS  
UNITED STATES — 1969-73



coming year, it is estimated that approximately 29,000 cases of measles will be reported in 1973. This is nearly 7,000 more than the 1968 total (22,231 cases), which was the lowest number ever reported to CDC.

### CURRENT TRENDS GONORRHEA SCREENING AMONG FEMALES — United States, 1972-73

Between July and December 1972, a total of 1,653,628 women were tested for gonorrhea in expanded screening programs throughout the country; 5.7% (93,930) were culture-positive for the 6-month period (Table 3). Preliminary data for the 3-month period October-December were reported previously (MMWR, Vol. 22, No. 7).

Overall, positivity rates were highest in venereal disease clinics, where approximately 13% of the tests were performed. In other health care facilities, positivity rates ranged from 0.6% among women tested at industrial screening clinics to 7.6% among enrollees in manpower training programs.

(Continued on page 151)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING APRIL 28, 1973 AND APRIL 29, 1972 (17th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES . . . . .	34	9	5,921	—	65	27	23	8	142	1,049	1,083 <sup>a</sup>
NEW ENGLAND . . . . .	—	—	708	—	2	—	2	—	3	70	66
Maine *	—	—	29	—	—	—	—	—	—	—	2
New Hampshire *	—	—	32	—	—	—	—	—	1	6	6
Vermont . . . . .	—	—	15	—	—	—	—	—	—	5	4
Massachusetts . . . . .	—	—	239	—	—	—	1	—	1	30	42
Rhode Island . . . . .	—	—	134	—	2	—	—	—	—	13	2
Connecticut . . . . .	—	—	259	—	—	—	1	—	1	16	10
MIDDLE ATLANTIC . . . . .	10	—	180	—	—	2	—	—	30	133	178
Upstate New York . . . . .	2	—	4	—	—	—	—	—	5	42	38
New York City . . . . .	—	—	149	—	—	1	—	—	8	16	44
New Jersey . . . . .	7	—	NN	—	—	—	—	—	9	53	54
Pennsylvania . . . . .	1	—	27	—	—	1	—	—	8	22	42
EAST NORTH CENTRAL . . . . .	7	—	2,557	—	—	14	5	1	23	189	128
Ohio . . . . .	—	—	732	—	—	7	1	—	9	70	20
Indiana . . . . .	—	—	241	—	—	—	1	1	—	12	8
Illinois . . . . .	3	—	—	—	—	5	1	—	2	38	33
Michigan . . . . .	4	—	589	—	—	2	2	—	12	59	62
Wisconsin . . . . .	—	—	995	—	—	—	—	—	—	10	5
WEST NORTH CENTRAL . . . . .	1	2	556	—	7	—	3	—	6	51	53
Minnesota . . . . .	1	—	3	—	—	—	—	—	1	20	18
Iowa . . . . .	—	1	227	—	—	—	1	—	2	1	6
Missouri . . . . .	—	—	260	—	—	—	2	—	1	11	9
North Dakota . . . . .	—	—	37	—	—	—	—	—	—	1	3
South Dakota . . . . .	—	—	—	—	7	—	—	—	—	7	4
Nebraska . . . . .	—	1	4	—	—	—	—	—	—	1	1
Kansas . . . . .	—	—	25	—	—	—	—	—	2	10	12
SOUTH ATLANTIC . . . . .	5	1	416	—	—	—	6	—	14	174	186
Delaware . . . . .	—	—	22	—	—	—	—	—	—	2	5
Maryland . . . . .	—	—	25	—	—	—	1	—	2	10	26
District of Columbia . . . . .	—	—	7	—	—	—	—	—	—	1	2
Virginia . . . . .	1	1	103	—	—	—	1	—	2	13	27
West Virginia . . . . .	—	—	228	—	—	—	—	—	—	8	6
North Carolina . . . . .	—	—	NN	—	—	—	—	—	1	26	46
South Carolina . . . . .	—	—	31	—	—	—	—	—	—	7	6
Georgia . . . . .	—	—	—	—	—	—	—	—	—	23	12
Florida . . . . .	4	—	—	—	—	—	4	—	9	84	56
EAST SOUTH CENTRAL . . . . .	1	—	137	—	—	3	3	3	10	74	57
Kentucky . . . . .	—	—	26	—	—	1	—	—	—	19	17
Tennessee . . . . .	—	—	NN	—	—	—	—	1	5	44	35
Alabama . . . . .	1	—	99	—	—	2	3	1	5	9	—
Mississippi . . . . .	—	—	12	—	—	—	—	1	—	2	5
WEST SOUTH CENTRAL . . . . .	4	6	842	—	2	—	—	2	11	167	101
Arkansas *	—	—	6	—	—	—	—	—	—	—	5
Louisiana . . . . .	—	1	NN	—	—	—	—	—	3	16	16
Oklahoma . . . . .	2	—	56	—	—	—	—	2	1	37	5
Texas . . . . .	2	5	780	—	2	—	—	—	7	114	75
MOUNTAIN . . . . .	1	—	187	—	2	1	—	—	4	28	84
Montana . . . . .	1	—	31	—	—	—	—	—	—	2	5
Idaho . . . . .	—	—	—	—	—	1	—	—	1	3	4
Wyoming . . . . .	—	—	63	—	—	—	—	—	—	—	3
Colorado *	—	—	37	—	—	—	—	—	2	14	16
New Mexico . . . . .	—	—	29	—	2	—	—	—	—	7	33
Arizona *	—	—	—	—	—	—	—	—	—	—	13
Utah . . . . .	—	—	27	—	—	—	—	—	1	1	9
Nevada . . . . .	—	—	—	—	—	—	—	—	—	1	1
PACIFIC . . . . .	5	—	338	—	52	7	4	2	41	163	230
Washington . . . . .	—	—	277	—	47	—	1	—	—	13	14
Oregon . . . . .	—	—	2	—	3	—	—	1	5	23	31
California . . . . .	5	—	—	—	2	7	3	1	35	124	159
Alaska . . . . .	—	—	8	—	—	—	—	—	1	1	20
Hawaii . . . . .	—	—	51	—	—	—	—	—	—	2	6
Guam *	—	—	—	—	—	—	—	—	—	—	2
Puerto Rico . . . . .	—	—	29	—	—	—	—	—	4	36	32
Virgin Islands . . . . .	—	—	—	—	—	—	—	—	—	—	2

\*Delayed reports: Brucellosis: Ark. 1, Colo. 2

Chickenpox: Me. 113, N.H. 14, Ark. 2, Guam 5

Hepatitis A: Me. 9, N.H. delete 1, Ark. 5, Ariz. 3, Guam 1

## Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING APRIL 28, 1973 AND APRIL 29, 1972 (17th WEEK) — Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	2	72	1,055	14,186	15,345	34	574	571	2,269	34,243	1,558	15,955
NEW ENGLAND .....	—	5	445	5,180	1,291	1	27	24	95	1,476	323	2,000
Maine *	—	—	1	17	159	—	—	3	9	99	—	3
New Hampshire *	—	—	5	728	98	—	4	—	7	140	14	22
Vermont .....	—	2	4	83	86	—	2	—	2	165	—	1
Massachusetts .....	—	1	244	2,837	190	1	11	13	25	526	205	1,163
Rhode Island .....	—	—	1	301	217	—	1	6	8	140	81	133
Connecticut .....	—	2	190	1,214	541	—	9	2	44	406	23	43
MIDDLE ATLANTIC .....	—	10	85	1,102	668	6	85	58	445	4,071	312	2,352
Upstate New York .....	—	5	35	282	75	—	30	15	NN	NN	20	177
New York City .....	—	1	27	581	134	—	15	13	176	2,383	18	202
New Jersey *	—	1	12	128	434	2	20	16	215	979	268	1,799
Pennsylvania .....	—	3	11	111	25	4	20	14	54	709	6	174
EAST NORTH CENTRAL .....	—	9	308	4,568	5,947	6	62	73	655	9,473	375	3,465
Ohio .....	—	2	17	195	185	3	31	26	154	1,652	138	455
Indiana .....	—	1	58	394	871	—	1	9	46	718	58	674
Illinois .....	—	4	47	1,035	2,144	2	12	15	74	1,719	37	425
Michigan .....	—	2	151	2,276	1,039	1	18	20	248	2,604	67	913
Wisconsin .....	—	—	35	668	1,708	—	—	3	133	2,780	75	998
WEST NORTH CENTRAL .....	1	4	17	279	527	4	47	49	122	3,350	35	791
Minnesota .....	1	1	—	14	14	—	—	10	—	60	5	142
Iowa .....	—	—	7	190	304	2	7	1	—	2,167	5	148
Missouri .....	—	1	9	22	137	2	25	15	78	422	—	224
North Dakota .....	—	1	1	29	36	—	3	—	2	48	14	57
South Dakota .....	—	—	—	—	4	—	3	2	—	7	2	6
Nebraska .....	—	—	—	1	14	—	4	7	2	76	9	123
Kansas .....	—	1	—	23	18	—	5	14	40	570	—	91
SOUTH ATLANTIC .....	—	8	31	716	1,355	6	97	130	252	3,997	104	1,323
Delaware .....	—	—	—	4	11	—	—	1	5	189	1	4
Maryland .....	—	—	—	—	10	1	16	23	16	422	—	8
District of Columbia .....	—	—	—	—	—	—	1	4	3	18	—	2
Virginia *	—	4	6	343	38	—	14	32	39	378	12	344
West Virginia .....	—	—	16	129	149	1	2	6	93	1,412	34	158
North Carolina .....	—	1	—	6	26	—	19	20	NN	NN	33	170
South Carolina .....	—	1	4	37	167	—	7	12	21	261	4	63
Georgia .....	—	—	—	18	122	—	16	2	6	17	—	6
Florida .....	—	2	5	179	832	4	22	30	69	1,300	20	568
EAST SOUTH CENTRAL .....	—	2	32	445	845	—	55	47	150	2,235	72	794
Kentucky .....	—	—	13	315	454	—	23	14	13	709	1	322
Tennessee .....	—	—	19	103	146	—	19	18	114	852	23	282
Alabama .....	—	2	—	—	108	—	9	9	21	256	45	92
Mississippi .....	—	—	—	27	137	—	4	6	2	418	3	98
WEST SOUTH CENTRAL .....	1	8	39	460	940	4	88	70	109	2,270	101	1,091
Arkansas *	—	—	1	26	7	1	9	7	8	166	—	92
Louisiana .....	—	1	—	53	58	1	18	19	1	48	7	74
Oklahoma .....	—	1	5	22	8	—	7	6	31	242	26	130
Texas .....	1	6	33	359	867	2	54	38	69	1,814	68	795
MOUNTAIN .....	—	7	28	384	1,025	1	12	11	85	1,758	119	1,858
Montana .....	—	1	—	12	12	1	3	2	10	152	29	392
Idaho .....	—	—	5	158	12	—	1	2	—	99	1	14
Wyoming .....	—	—	—	10	1	—	—	1	5	368	—	5
Colorado .....	—	1	19	103	338	—	2	2	25	223	78	1,237
New Mexico .....	—	1	4	90	67	—	1	1	25	697	11	133
Arizona *	—	4	—	10	467	—	2	1	—	140	—	15
Utah .....	—	—	—	1	128	—	1	1	20	72	—	59
Nevada .....	—	—	—	—	—	—	2	1	—	7	—	3
PACIFIC .....	—	19	70	1,052	2,747	6	101	109	356	5,613	117	2,277
Washington .....	—	—	28	419	608	—	7	11	49	684	14	354
Oregon .....	—	1	26	282	27	1	8	7	47	1,104	36	298
California .....	—	15	16	344	2,029	5	83	88	233	3,272	66	1,610
Alaska .....	—	2	—	—	11	—	3	—	19	422	—	1
Hawaii .....	—	1	—	7	72	—	—	3	8	131	1	14
Guam *	—	—	—	3	2	—	—	6	—	2	—	2
Puerto Rico .....	—	—	129	973	287	—	4	2	45	334	2	18
Virgin Islands .....	—	—	—	1	1	—	—	2	—	7	—	1

\*Delayed reports: Measles: Me. 2, N.H. 123

Meningococcal infections: Va. delete 1

Mumps: Me. 23, Ark. 6, Guam 1

Rubella: Me. 1, N.H. 9, N.J. 211, Va. delete 1, Ariz. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING APRIL 28, 1973 AND APRIL 29, 1972 (17th WEEK) - Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES . . . . .	23	683	10,253	19	7	296	2	15	16,085	540	83	1,155
NEW ENGLAND . . . . .	1	19	342	—	—	3	—	1	537	20	3	67
Maine . . . . .	—	1	27	—	—	—	—	—	20	—	1	41
New Hampshire . . . . .	—	1	20	—	—	—	—	—	19	—	2	24
Vermont . . . . .	—	—	8	—	—	—	—	—	5	—	—	1
Massachusetts . . . . .	—	16	191	—	—	3	—	1	226	14	—	1
Rhode Island . . . . .	1	—	26	—	—	—	—	—	26	—	—	—
Connecticut . . . . .	—	1	70	—	—	—	—	—	241	6	—	—
MIDDLE ATLANTIC . . . . .	4	115	2,142	—	—	20	—	1	1,963	97	—	6
Upstate New York . . . . .	—	18	397	—	—	3	—	—	575	2	—	3
New York City . . . . .	2	55	807	—	—	7	—	—	1,064	62	—	—
New Jersey . . . . .	2	13	386	—	—	6	—	—	324	19	—	—
Pennsylvania . . . . .	—	29	552	—	—	4	—	1	—	14	—	3
EAST NORTH CENTRAL . . . . .	4	103	1,579	—	—	11	—	—	1,548	16	2	109
Ohio *. . . . .	1	33	505	—	—	5	—	—	401	2	—	15
Indiana . . . . .	—	15	214	—	—	—	—	—	270	—	—	32
Illinois . . . . .	2	26	459	—	—	1	—	—	175	2	1	31
Michigan . . . . .	—	29	344	—	—	3	—	—	506	6	—	1
Wisconsin . . . . .	1	—	57	—	—	2	—	—	196	6	1	30
WEST NORTH CENTRAL . . . . .	3	31	393	2	—	8	—	1	866	9	21	323
Minnesota . . . . .	—	4	49	—	—	3	—	—	151	3	11	107
Iowa . . . . .	—	1	40	—	—	—	—	—	75	—	—	78
Missouri . . . . .	3	12	188	2	—	3	—	1	281	5	1	29
North Dakota . . . . .	—	2	12	—	—	—	—	—	13	—	5	52
South Dakota . . . . .	—	3	28	—	—	1	—	—	43	—	—	29
Nebraska . . . . .	—	1	29	—	—	1	—	—	138	—	—	1
Kansas . . . . .	—	8	47	—	—	—	—	—	165	1	4	27
SOUTH ATLANTIC . . . . .	4	142	1,959	4	5	213	—	5	3,381	160	9	102
Delaware . . . . .	—	3	23	—	—	—	—	1	93	—	—	—
Maryland . . . . .	—	6	188	—	1	3	—	—	340	6	1	5
District of Columbia . . . . .	—	11	111	—	—	—	—	—	361	15	—	—
Virginia *. . . . .	—	19	259	1	—	—	—	—	238	50	3	38
West Virginia . . . . .	—	7	107	—	—	—	—	—	59	1	—	10
North Carolina *. . . . .	—	30	326	1	1	3	—	2	574	18	—	—
South Carolina . . . . .	—	10	194	—	—	1	—	—	317	23	—	—
Georgia . . . . .	—	15	324	2	—	1	—	2	502	25	3	33
Florida . . . . .	4	41	427	—	3	205	—	—	897	22	2	16
EAST SOUTH CENTRAL . . . . .	2	67	893	5	1	3	—	3	2,387	51	7	243
Kentucky . . . . .	—	21	236	1	—	1	—	—	233	25	4	123
Tennessee . . . . .	1	19	252	3	1	1	—	1	695	12	3	90
Alabama . . . . .	1	17	242	—	—	1	—	2	1,117	1	—	30
Mississippi . . . . .	—	10	163	1	—	—	—	—	342	13	—	—
WEST SOUTH CENTRAL . . . . .	4	72	1,035	8	—	4	2	4	2,244	75	29	213
Arkansas . . . . .	—	7	109	2	—	—	—	—	609	1	10	53
Louisiana *. . . . .	2	16	196	—	—	—	—	—	358	20	1	13
Oklahoma . . . . .	1	8	93	4	—	1	2	4	147	6	12	69
Texas . . . . .	1	41	637	2	—	3	—	—	1,130	48	6	78
MOUNTAIN . . . . .	—	21	336	—	—	2	—	—	671	33	2	8
Montana . . . . .	—	—	7	—	—	—	—	—	38	1	—	—
Idaho . . . . .	—	—	10	—	—	—	—	—	18	—	—	—
Wyoming . . . . .	—	—	10	—	—	—	—	—	6	1	—	—
Colorado . . . . .	—	7	65	—	—	—	—	—	146	8	—	—
New Mexico . . . . .	—	3	76	—	—	1	—	—	219	2	2	2
Arizona *. . . . .	—	10	133	—	—	1	—	—	164	6	—	6
Utah . . . . .	—	1	11	—	—	—	—	—	27	—	—	—
Nevada . . . . .	—	—	24	—	—	—	—	—	53	15	—	—
PACIFIC . . . . .	1	113	1,574	—	1	32	—	—	2,488	79	10	84
Washington . . . . .	—	22	144	—	—	—	—	—	245	1	—	—
Oregon . . . . .	—	11	84	—	—	2	—	—	263	2	—	—
California . . . . .	1	75	1,214	—	1	30	—	—	1,875	74	9	80
Alaska . . . . .	—	—	36	—	—	—	—	—	52	—	1	4
Hawaii . . . . .	—	5	96	—	—	—	—	—	53	2	—	—
Guam *. . . . .	—	—	5	—	—	—	—	—	—	—	—	—
Puerto Rico . . . . .	3	27	188	—	—	1	—	—	86	12	—	13
Virgin Islands . . . . .	—	—	—	—	—	—	—	—	4	—	—	—

\*Delayed reports: TB: N.C. delete 1, Ariz. 18

Syphilis: Ohio delete 1, Ariz. 1

Tularemia: Va. delete 1

Rabies: Ariz. 1

Gonorrhea: La. delete 4, Ariz. 165, Guam 4

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING APRIL 28, 1973

Week No.

17

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	682	436	12	27	SOUTH ATLANTIC	1,182	667	37	57
Boston, Mass.	190	116	7	9	Atlanta, Ga.	175	97	6	8
Bridgeport, Conn.	33	21	—	—	Baltimore, Md.	234	130	8	3
Cambridge, Mass.	19	18	—	2	Charlotte, N. C.	50	29	1	—
Fall River, Mass.	25	22	—	2	Jacksonville, Fla.	76	48	1	1
Hartford, Conn.	66	42	2	3	Miami, Fla.	73	37	1	4
Lowell, Mass.	31	20	—	2	Norfolk, Va.	69	34	3	10
Lynn, Mass.	29	20	—	1	Richmond, Va.	86	47	2	14
New Bedford, Mass.	37	28	—	2	Savannah, Ga.	13	6	1	1
New Haven, Conn.	56	30	1	1	St. Petersburg, Fla.	98	75	2	4
Providence, R. I.	56	35	1	1	Tampa, Fla.	95	53	7	4
Somerville, Mass.	7	5	—	—	Washington, D. C.	156	77	3	6
Springfield, Mass.	48	23	—	2	Wilmington, Del.	57	34	2	2
Waterbury, Conn.	29	17	—	—	EAST SOUTH CENTRAL	768	410	24	30
Worcester, Mass.	56	39	1	2	Birmingham, Ala.	117	62	6	2
MIDDLE ATLANTIC	3,103	1,950	91	126	Chattanooga, Tenn.	61	36	1	6
Albany, N. Y.	51	29	3	1	Knoxville, Tenn.	41	26	—	—
Allentown, Pa.	28	21	—	1	Louisville, Ky.	142	84	1	13
Buffalo, N. Y.	160	96	3	16	Memphis, Tenn.	202	93	9	4
Camden, N. J.	47	31	1	2	Mobile, Ala.	59	33	—	1
Elizabeth, N. J.	27	22	—	—	Montgomery, Ala.	34	20	1	2
Erie, Pa.	48	36	—	8	Nashville, Tenn.	112	56	6	2
Jersey City, N. J.	80	52	1	4	WEST SOUTH CENTRAL	1,419	812	70	60
Newark, N. J.	99	36	18	5	Austin, Tex.	40	28	—	9
New York City, N. Y. †	1,609	1,027	32	48	Baton Rouge, La.	59	40	1	2
Paterson, N. J.	47	30	2	2	Corpus Christi, Tex.	42	22	2	1
Philadelphia, Pa.	307	178	9	1	Dallas, Tex.	207	122	12	2
Pittsburgh, Pa.	192	110	7	13	El Paso, Tex.	64	41	2	5
Reading, Pa.	41	33	1	5	Fort Worth, Tex.	80	42	7	5
Rochester, N. Y.	120	80	6	9	Houston, Tex.	299	153	7	9
Schenectady, N. Y.	24	16	1	1	Little Rock, Ark.	60	34	8	7
Scranton, Pa.	41	27	1	1	New Orleans, La.	182	101	12	5
Syracuse, N. Y.	82	55	5	2	Oklahoma City, Okla. *	99	61	5	3
Trenton, N. J.	49	30	1	3	San Antonio, Tex.	118	71	3	—
Utica, N. Y.	28	25	—	3	Shreveport, La.	83	52	4	6
Yonkers, N. Y.	23	16	—	1	Tulsa, Okla.	86	45	7	6
EAST NORTH CENTRAL	2,611	1,502	142	93	MOUNTAIN	527	303	26	20
Akron, Ohio	82	49	7	—	Albuquerque, N. Mex.	46	28	2	3
Canton, Ohio	47	30	2	2	Colorado Springs, Colo.	28	12	1	6
Chicago, Ill.	641	337	50	23	Denver, Colo.	122	68	8	6
Cincinnati, Ohio	182	113	2	7	Las Vegas, Nev.	30	12	2	—
Cleveland, Ohio	210	113	8	6	Ogden, Utah	27	17	—	2
Columbus, Ohio	137	78	8	7	Phoenix, Ariz.	119	70	2	1
Dayton, Ohio	112	56	5	3	Pueblo, Colo.	23	18	1	2
Detroit, Mich.	299	177	10	4	Salt Lake City, Utah	62	41	5	—
Evansville, Ind.	48	32	—	2	Tucson, Ariz.	70	37	5	—
Fort Wayne, Ind.	43	27	2	2	PACIFIC	1,668	1,077	59	52
Gary, Ind.	48	24	2	5	Berkeley, Calif.	16	13	—	—
Grand Rapids, Mich.	63	40	3	7	Fresno, Calif.	47	29	3	—
Indianapolis, Ind.	158	87	12	3	Glendale, Calif.	21	18	—	—
Madison, Wis.	34	18	2	2	Honolulu, Hawaii	59	39	4	—
Milwaukee, Wis.	158	98	10	6	Long Beach, Calif.	94	55	5	3
Peoria, Ill.	60	32	6	1	Los Angeles, Calif.	520	339	12	16
Rockford, Ill.	49	31	3	3	Oakland, Calif.	91	59	2	1
South Bend, Ind.	53	34	—	6	Pasadena, Calif.	36	27	1	1
Toledo, Ohio	121	86	6	2	Portland, Oreg.	128	75	8	4
Youngstown, Ohio	66	40	4	2	Sacramento, Calif.	67	45	3	1
WEST NORTH CENTRAL	826	521	32	30	San Diego, Calif.	118	76	5	4
Des Moines, Iowa	83	52	4	—	San Francisco, Calif.	195	117	7	6
Duluth, Minn.	38	27	1	2	San Jose, Calif.	62	37	2	1
Kansas City, Kans.	34	18	1	4	Seattle, Wash.	126	88	4	7
Kansas City, Mo.	124	70	3	—	Spokane, Wash.	47	30	2	7
Lincoln, Nebr.	19	14	—	—	Tacoma, Wash.	41	30	1	1
Minneapolis, Minn.	102	75	5	3	Total	12,786	7,678	493	495
Omaha, Nebr.	74	40	4	1	Expected Number	12,709	7,314	533	457
St. Louis, Mo.	212	130	5	12	Cumulative Total (includes reported corrections for previous weeks)	232,771	138,952	8,487	11,383
St. Paul, Minn.	78	49	6	—					
Wichita, Kans.	62	46	3	8					

†Delayed report for week ending April 21, 1973

\*Estimate based on average percent of divisional total

GONORRHEA – Continued

Preliminary data indicate that an additional 1,379,608 women were tested by all types of health care providers be-

tween January and March 1973; the positivity rate for all sources was 5.1%.  
(Reported by the Venereal Disease Branch, State and Community Services Division, CDC.)

Table 3  
Results of Gonorrhea Culture Tests on Females  
United States\* – July-December 1972

Source of Test	Number Tested	Number Positive	Percent Positive
<b>CLINICS</b>	<b>885,231</b>	<b>70,411</b>	<b>8.0</b>
Non-Venereal Disease Clinics	674,293	28,893	4.3
Health Department	376,215	15,851	4.2
Family Planning	247,045	9,728	3.9
Prenatal, Ob-Gyn	38,600	2,027	5.3
Cancer Detection	5,196	151	2.9
Combinations or Other	85,374	3,945	4.6
Public/Private Hospital – Outpatient	283,569	12,623	4.5
Family Planning	26,261	773	2.9
Prenatal, Ob-Gyn	76,683	3,133	4.1
Cancer Detection	4,300	67	1.6
Combinations or Other	176,325	8,650	4.9
Group Health Clinics	14,509	419	2.9
Venereal Disease Clinics	210,938	41,518	19.7
Gonorrhea Contacts	33,215	10,076	30.3
Syphilis: Contact/Cluster/Reactor	1,682	277	16.5
Other	176,041	31,165	17.7
<b>OTHER HEALTH PROVIDERS</b>	<b>768,397</b>	<b>23,519</b>	<b>3.1</b>
Public/Private Hospital – Inpatient	16,282	884	5.4
Obstetric	4,078	163	4.0
Gynecologic	319	33	10.3
Combinations or Other	11,885	688	5.8
Community Health Centers	123,321	5,098	4.1
Family Planning	59,526	1,785	3.0
Prenatal, Ob-Gyn	8,528	318	3.7
Cancer Detection	963	33	3.4
Combinations or Other	54,304	2,962	5.5
Private Physicians	322,470	9,673	3.0
Private Family Planning Groups	166,127	3,876	2.3
Student Health Centers	37,271	780	2.1
Manpower Training Agencies	3,617	275	7.6
Industrial Screening	4,409	28	0.6
Military/Dependents	11,655	165	1.4
Correction or Detention Centers	15,038	872	5.8
Not Specified	68,207	1,868	2.7
<b>TOTAL (All Providers)</b>	<b>1,653,628</b>	<b>93,930</b>	<b>5.7</b>

\*Does not include reports from Idaho, Guam, or Pacific Island Trust Territories.

EPIDEMIOLOGIC NOTES AND REPORTS  
PET MONKEY-ASSOCIATED TUBERCULOSIS – Washington

On October 23, 1972, a pet stump-tail macaque monkey (*Macaca arctoides*) was taken to a veterinarian in Seattle, Washington, because of a persistent cough. The animal was found to be tuberculin-positive and had evidence of nodular lesions in the right lung on chest X-ray. The monkey was sacrificed and a necropsy performed; granulomatous lesions were found in its lung, liver, spleen, and 1 lymph node. *Mycobacterium tuberculosis* was isolated from the lung.

On October 31, all 5 members of the family who owned the monkey were tuberculin tested with 5 TU PPD and found to be negative. However, in December, a skin test on the 9-year-old son showed a 40 mm reaction, and the 18-year-old daughter had a 12 mm reaction in January 1973. The other family members were still negative at this time. Both siblings were placed on isoniazid chemoprophylaxis.

Investigation revealed that this monkey (A) had been

## TUBERCULOSIS — Continued

bought by the Washington family on October 9, 1972. Prior to purchase, it had been kept by several different California residents. It was 1 of 2 stump-tail macaque monkeys (A and B) purchased by 2 different individuals from an Inglewood, California, pet shop in 1969. In March 1971, both monkeys were sold to a 3rd person. The new owner had been hospitalized with active tuberculosis in May 1970, and *M. tuberculosis* had been isolated from his sputum.

At the time monkeys A and B were purchased by the new owner, he had a 3rd stump-tail macaque monkey (C) that had been purchased as an infant in early 1970. At the time the new owner was hospitalized, monkey C was tuberculin tested and found to be negative. On retesting in August and October 1970, monkey C was tuberculin-positive and had a positive chest X-ray. The owner refused to dispose of it. During the period March-November 1971, the 3 monkeys were housed in the same outdoor cage; in November, monkeys A and B were boarded at the home of another family. Monkey C died of tuberculosis on March 18, 1972, and *M. tuberculosis* was isolated from its tissues. Monkey B died in June 1972 of undetermined causes. A necropsy was not performed, but the animal had a history of cough. Monkey A was later sold to the Washington family.

Based on available evidence, it is likely that monkey C acquired tuberculosis from its owner in 1970 and subsequently

infected monkeys A and B. In turn, monkey A infected the Washington patients. Attempts are now being made to determine if other persons exposed to the monkeys have tuberculous infections.

(Reported by Claris Hyatt, M.D., Health Officer, Helen Marshall, M.D., Tuberculosis Clinician, and Harold F. Luke, D.V.M., Public Health Veterinarian, Snohomish Health District, Everett, Washington; Ray B. Watkins, D.V.M., Chief Veterinarian, Seattle-King County Health Department; John A. Beare, M.D., Acting State Epidemiologist, Washington Department of Social and Health Services; A. R. Hamlin, Investigation and Enforcement Division, Comparative Medical and Veterinary Public Health Services, Department of Health Services, Los Angeles County, California; Edmond V. Bayer, D.V.M., Public Health Veterinarian, and James Chin, M.D., State Epidemiologist, California State Department of Public Health.)

## Editorial Note

This episode illustrates the transmissibility of *M. tuberculosis* between primates, both human and nonhuman. Tuberculosis in nonhuman primates may be acquired from either a human or an animal source, often spreads rapidly between animals, and may be transmitted to human contacts. Tuberculosis in nonhuman primates may cause significant economic losses to laboratories, zoos, and the pet trade and presents a definite hazard to human health.

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Director, Center for Disease Control  
Director, Epidemiology Program, CDC  
Editor, MMWR

David J. Sencer, M.D.  
Philip S. Brachman, M.D.  
Michael B. Gregg, M.D.

The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to:

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HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION  
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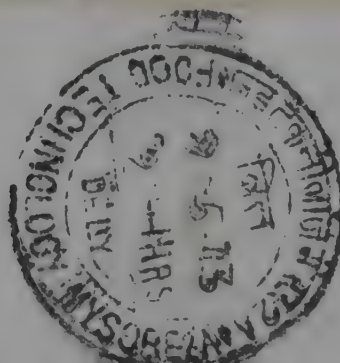


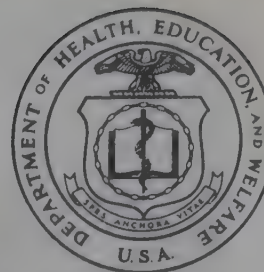
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# Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

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## EPIDEMIOLOGIC NOTES AND REPORTS BOTULISM - West Virginia, Pennsylvania

Between May 6 and 9, 1973, 8 of 28 persons from 5 related families became ill with nausea, vomiting, and abdominal pain 12-55 hours after sharing a meal of spaghetti and assorted meats, salads, and condiments. All 8 were hospitalized, 7 in Wheeling, West Virginia, and 1 in McKeesport, Pennsylvania; 7 developed signs of neurologic dysfunction 1-3 days after onset of the gastrointestinal symptoms. Cranial nerve abnormalities, weakness, and fatigue were common, and sore throat or dryness of the mouth was reported by all.

Food-specific attack rates for 18 items served at the gathering implicated a canned fried hot pepper product as the probable vehicle, and mouse neutralization tests performed by the Food and Drug Administration on a sample of the peppers remaining from the meal identified botulinal toxin, type B. All 8 patients were given trivalent botulinal antitoxin

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(Connaught) and are in satisfactory condition. Pretreatment serum specimens from the 8 patients were negative for detectable toxin.

The pepper product in which the toxin was detected was Nancy's Mild Hot Peppers In Oil, prepared by Felix and Sons Wholesale, Inc., Fairmont, West Virginia, a small family company operating from a private home. The peppers are fried, packed in oil in glass jars, and distributed in West Virginia, Pennsylvania, and Ohio. On May 11, the company

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	19th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 19 WEEKS		
	May 12, 1973	May 13, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	24	56	26	695	664	544
Brucellosis	2	1	4	50	44	52
Chickenpox	6,333	5,190	---	108,820	81,421	---
Diphtheria	—	1	1	72	40	66
Encephalitis, primary:						
Arthropod-borne and unspecified	29	13	20	372	297	371
Encephalitis, post-infectious	13	7	9	93	101	118
Hepatitis, serum (Hepatitis B)	182	174	125	2,782	3,480	2,493
Hepatitis, infectious (Hepatitis A)	1,014	1,171	1,113	18,718	20,985	20,721
Malaria	6	35	84	82	494	938
Measles (rubeola)	1,098	1,399	1,399	16,564	17,996	17,996
Meningococcal infections, total	40	43	47	655	657	1,259
Civilian	39	42	42	638	629	1,130
Military	1	1	2	17	28	131
Mumps	2,176	2,191	3,022	38,539	40,900	52,450
Rubella (German measles)	1,215	788	2,283	18,962	14,573	28,158
Tetanus	1	4	3	25	34	34
Tuberculosis, new active	701	645	---	11,547	11,868	---
Tularemia	1	2	2	21	41	33
Typhoid fever	5	6	6	307	95	92
Typhus, tick-borne (Rky. Mt. spotted fever)	9	10	10	30	31	21
Venereal Diseases:						
Gonorrhea	17,856	13,289	---	280,479	248,066	---
Syphilis, primary and secondary	469	509	---	9,754	8,689	---
Rabies in animals	94	87	79	1,331	1,652	1,479

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total: Calif. - 1	1
Botulism:	—	Paralytic: Calif. - 1	1
Congenital rubella syndrome: Hawaii - 1, Va. - 1	9	Psittacosis: Calif. - 2	5
Leprosy: Calif. - 1	42	Rabies in man:	—
Leptospirosis:	11	Trichinosis: N. Mex. - 1	33
Plague:	—	Typhus, murine: Miss. - 1	7

**BOTULISM — Continued**

voluntarily recalled all of their products. Studies to determine the error in processing are in progress.

Since the initial investigation, 4 additional cases of gastroenteritis associated with the ingestion of this pepper product have been reported to CDC. One of the ill persons had eaten peppers left over from the May 6 meal, but the other 3 were not related to the initial patients and lived in 3 separate communities in the tristate area. All 4 patients were treated with botulinal antitoxin. No neurologic symptoms have been reported in any of these patients.

(Reported by George Kellas, M.D., Director, Medical Education, Francis Gaydosh, M.D., Thomas Ritz, M.D., Michael Caruso, M.D., and Richard Terry, M.D., Wheeling Hospital, Wheeling, West Virginia; Thomas L. Thomas, M.D., Director, and Jack E. Clem, Administrative Assistant to the Director, Wheeling-Ohio County Health Department; William L. Cooke, M.D., Director, Division of Disease Control, and N. H. Dyer, M.D., Director of Health, West Virginia Department of Health; Walter McElroy, M.D., McKeesport Hospital, McKeesport, Pennsylvania; Eleanor Streiff, Director, Supportive Services, Hugh Robins, M.D., Assistant Deputy Director, Medical Services, Gerald Barron, Administrator, Food Division, and Joseph

Sarandria, Laboratory Director, Allegheny County Health Department; W. D. Schrack, Jr., M.D., Director, Division of Communicable Diseases, Pennsylvania Department of Health; the Food and Drug Administration; and 3 EIS Officers.)

**Editorial Note**

Patients in this outbreak presented with characteristic symptoms closely resembling those in a carefully documented family outbreak of type B botulism (1). The illness in the current outbreak was relatively mild; fixed dilated pupils and respiratory impairment, 2 commonly reported signs, were not observed. No additional cases have been reported since the product was recalled.

Including the present episode, 81 botulism outbreaks have been reported to CDC from the United States in the past 10 years, and 7 have been traced to peppers; 3 were caused by type A toxin, 3 by type B, and 1 by an unidentified toxin. Of these 7 outbreaks, this is the 1st caused by a commercially processed pepper product.

**Reference**

1. Koenig MG, Drutz DJ, Mushlin AI, Schaffner W, Rogers DE: Type B botulism in man. *Am J Med* 42:208-219, 1967

### INTERNATIONAL NOTES FOLLOW-UP ON SMALLPOX — United Kingdom

As previously reported (MMWR, Vol. 22, No. 14), 3 cases of smallpox occurred in the United Kingdom in March and April 1973. Two of these were secondary cases in a 34-year-old man and his 29-year-old wife who were contacts of the index case; both of these patients died. On April 27, the United Kingdom reported a 4th case of smallpox in a 22-year-old nurse who provided care to the 2nd and 3rd patients. The nurse gave a history of vaccination in childhood and a subsequent vaccination at an unknown time; because she had had close contact with the secondary cases on April 4 and 5, she was revaccinated on these 2 dates. On April 14, she became ill with fever, headache, and backache and had 2 small

popular eruptions on the dorsum of her hand. The illness lasted a few days and then spontaneously disappeared. Examination of these lesions for smallpox by electron microscopy was negative, and no virus was isolated in chicken eggs. The case was reported as *variola sine eruptione* on the basis of clinical evidence. As of May 13, 1973, metropolitan London was declared smallpox-free.

(Based on information provided by the Department of Health and Social Security, England; and the World Health Organization: *Weekly Epidemiological Record*, Vol. 48, Nos. 13, 14, and 17.)

### SURVEILLANCE SUMMARY SMALLPOX — Worldwide

**WORLDWIDE**

Through May 1, 1973, a total of 46,915 cases of smallpox had been reported to the World Health Organization (WHO) in 1973, an increase of 79% over the total recorded at this time last year. The increase is entirely attributable to a substantial increase in incidence in Bangladesh and northern India, where the most serious epidemics in many years have occurred this season. In all other countries, smallpox incidence declined sharply or, as in the case of Pakistan, remained essentially unchanged.

In 1970, a record low in smallpox incidence was recorded—33,640 cases. With the extension and improvement of surveillance activities and more complete reporting, the number of cases rose to 52,770 in 1971 and to 65,087 in 1972. This was regarded as an encouraging development: more cases were being detected, but more outbreaks were being contained. In 1973, based on present trends, a further increase in cases can be anticipated. Most of this increase,

however, reflects not improved notification, but a substantial increase in incidence in India and Bangladesh. The eventual total of cases in these 2 countries will depend on the efficacy of emergency measures now being taken. However, if present trends continue, India could record more than 60,000 cases, and Bangladesh 40,000 cases—over 90% of the world's total.

Although smallpox incidence increased this year, the number of countries reporting 1 or more cases each month continued to decline. In December 1972 and January and February 1973, 6 countries reported cases, the fewest ever to record cases in a given month. In 1973, smallpox cases have occurred in 10 countries; 4 of them—Ethiopia, Bangladesh, India, and Pakistan—account for all except 51 cases.

**India**

A serious threat to the success of the global eradication program was the development this year of major epidemics of smallpox across most of northern India, especially in the

(Continued on page 167)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MAY 12, 1973 AND MAY 13, 1972 (19th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
	1973	1973	1973	1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES . . . . .	24	2	6,333	—	72	29	13	13	182	1,014	1,171
NEW ENGLAND . . . . .	—	—	1,086	—	2	2	1	1	3	58	92
Maine* . . . . .	—	—	24	—	—	—	—	—	—	—	7
New Hampshire* . . . . .	—	—	20	—	—	—	—	—	—	3	7
Vermont . . . . .	—	—	58	—	—	—	—	—	—	5	3
Massachusetts . . . . .	—	—	640	—	—	2	1	—	—	29	51
Rhode Island . . . . .	—	—	119	—	2	—	—	—	1	6	13
Connecticut . . . . .	—	—	225	—	—	—	—	1	2	15	11
MIDDLE ATLANTIC . . . . .	2	—	489	—	—	2	1	1	42	192	165
Upstate New York . . . . .	1	—	1	—	—	—	—	—	4	45	35
New York City . . . . .	1	—	171	—	—	1	—	—	18	45	36
New Jersey . . . . .	—	—	NN	—	—	—	1	—	9	53	57
Pennsylvania . . . . .	—	—	317	—	—	1	—	1	11	49	37
EAST NORTH CENTRAL . . . . .	2	—	2,457	—	—	8	3	1	27	162	213
Ohio* . . . . .	—	—	527	—	—	3	2	—	8	59	47
Indiana . . . . .	—	—	210	—	—	—	—	—	—	6	7
Illinois . . . . .	—	—	—	—	—	—	—	1	9	48	68
Michigan . . . . .	2	—	485	—	—	5	1	—	10	45	87
Wisconsin . . . . .	—	—	1,235	—	—	—	—	—	—	4	4
WEST NORTH CENTRAL . . . . .	1	—	458	—	7	1	1	1	4	33	57
Minnesota . . . . .	—	—	—	—	—	—	—	1	—	7	2
Iowa . . . . .	1	—	374	—	—	1	—	—	—	1	9
Missouri . . . . .	—	—	29	—	—	—	—	—	—	8	26
North Dakota* . . . . .	—	—	33	—	—	—	—	—	—	—	3
South Dakota . . . . .	—	—	2	—	7	—	—	—	—	—	2
Nebraska . . . . .	—	—	5	—	—	—	—	—	4	1	1
Kansas . . . . .	—	—	15	—	—	—	1	—	—	16	14
SOUTH ATLANTIC . . . . .	3	—	518	—	—	3	1	—	12	121	141
Delaware . . . . .	—	—	—	—	—	—	—	—	—	—	—
Maryland . . . . .	—	—	48	—	—	—	—	—	2	11	24
District of Columbia . . . . .	—	—	8	—	—	—	—	—	—	—	5
Virginia . . . . .	—	—	75	—	—	1	—	—	3	9	34
West Virginia* . . . . .	—	—	228	—	—	—	1	—	—	8	8
North Carolina . . . . .	1	—	NN	—	—	2	—	—	6	28	21
South Carolina . . . . .	—	—	159	—	—	—	—	—	—	13	19
Georgia . . . . .	—	—	—	—	—	—	—	—	—	10	6
Florida . . . . .	2	—	—	—	—	—	—	—	1	42	24
EAST SOUTH CENTRAL . . . . .	3	1	148	—	—	2	—	—	13	83	62
Kentucky . . . . .	—	—	110	—	—	—	—	—	4	19	19
Tennessee . . . . .	2	—	NN	—	—	2	—	—	3	48	39
Alabama . . . . .	—	—	37	—	—	—	—	—	3	9	2
Mississippi . . . . .	1	1	1	—	—	—	—	—	3	7	2
WEST SOUTH CENTRAL . . . . .	4	—	529	—	3	4	1	3	11	141	176
Arkansas* . . . . .	—	—	41	—	—	—	—	—	2	2	4
Louisiana* . . . . .	1	—	NN	—	—	2	—	2	8	21	13
Oklahoma . . . . .	1	—	62	—	—	1	1	—	1	11	28
Texas . . . . .	2	—	426	—	3	1	—	1	—	107	131
MOUNTAIN . . . . .	—	—	179	—	2	—	1	1	3	36	47
Montana . . . . .	—	—	46	—	—	—	1	—	—	7	3
Idaho . . . . .	—	—	—	—	—	—	—	—	—	10	5
Wyoming . . . . .	—	—	8	—	—	—	—	—	—	—	—
Colorado . . . . .	—	—	24	—	—	—	—	—	1	9	12
New Mexico . . . . .	—	—	62	—	2	—	—	1	—	8	11
Arizona* . . . . .	—	—	—	—	—	—	—	—	—	1	12
Utah . . . . .	—	—	39	—	—	—	—	—	2	—	4
Nevada . . . . .	—	—	—	—	—	—	—	—	—	1	—
PACIFIC . . . . .	9	1	469	—	58	7	4	5	67	188	218
Washington . . . . .	—	—	412	—	53	—	—	—	4	29	29
Oregon . . . . .	—	—	2	—	3	—	1	—	2	16	29
California . . . . .	9	1	—	—	2	7	2	5	61	134	146
Alaska . . . . .	—	—	14	—	—	—	1	—	—	—	7
Hawaii . . . . .	—	—	41	—	—	—	—	—	—	9	7
Guam* . . . . .	—	—	—	—	—	—	—	—	—	—	—
Puerto Rico . . . . .	—	—	20	—	—	—	—	—	—	18	24
Virgin Islands . . . . .	—	—	4	—	—	—	—	—	—	—	—

\*Delayed reports: Aseptic meningitis: Guam 1

Chickenpox: Me. 7, N.H. 47, Ark. 6, Guam 28

Encephalitis, primary: N. Dak. 1

Hepatitis B: N.H. 1, Ohio 12, Ariz. 1

Hepatitis A: Me. 10, N.H. delete 1, Ohio delete 12, W. Va. 1,

Ark. 5, La. delete 1, Ariz. 21, Guam 2

## Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MAY 12, 1973 AND MAY 13, 1972 (19th WEEK) — Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	6	82	1,098	16,564	17,996	40	655	657	2,176	38,539	1,215	18,962
NEW ENGLAND .....	1	6	365	5,978	1,671	3	30	28	107	1,718	221	2,586
Maine *	—	—	1	19	171	—	—	3	1	130	—	41
New Hampshire *	—	—	4	738	163	2	6	1	—	144	27	311
Vermont .....	—	2	2	93	95	—	2	—	19	213	16	27
Massachusetts .....	1	2	205	3,274	276	—	11	14	34	588	113	1,475
Rhode Island .....	—	—	79	395	279	—	1	8	17	171	2	164
Connecticut .....	—	2	74	1,459	687	1	10	2	36	472	63	568
MIDDLE ATLANTIC .....	1	11	80	1,285	735	5	96	75	359	4,821	217	2,871
Upstate New York .....	1	6	32	332	91	—	35	18	NN	NN	13	231
New York City .....	—	1	25	652	154	2	18	21	200	2,870	44	283
New Jersey .....	—	1	8	150	454	1	21	18	109	1,128	148	2,154
Pennsylvania .....	—	3	15	151	36	2	22	18	50	823	12	203
EAST NORTH CENTRAL .....	2	11	385	5,413	7,024	3	75	90	728	10,672	255	4,095
Ohio .....	—	2	12	212	196	2	36	33	232	1,999	36	533
Indiana .....	—	1	26	452	994	—	2	9	42	806	37	760
Illinois .....	2	6	94	1,186	2,523	—	12	19	121	1,880	26	622
Michigan .....	—	2	205	2,783	1,246	1	22	25	187	2,923	93	1,068
Wisconsin .....	—	—	48	780	2,065	—	3	4	146	3,064	63	1,112
WEST NORTH CENTRAL .....	—	4	7	316	664	6	56	56	123	3,614	111	1,040
Minnesota .....	—	1	1	15	14	—	—	11	1	72	22	181
Iowa .....	—	—	5	209	430	3	11	2	87	2,361	1	150
Missouri .....	—	1	—	22	142	2	28	18	14	436	1	228
North Dakota .....	—	1	1	44	39	—	3	—	—	50	66	233
South Dakota .....	—	—	—	—	4	—	3	2	4	11	15	21
Nebraska .....	—	—	—	3	17	—	4	7	3	80	6	136
Kansas .....	—	1	—	23	18	1	7	16	14	604	—	91
SOUTH ATLANTIC .....	—	9	56	832	1,535	4	105	140	191	4,463	104	1,497
Delaware .....	—	—	—	5	12	—	—	1	10	205	1	7
Maryland .....	—	—	—	1	12	—	16	24	19	457	—	8
District of Columbia .....	—	—	—	—	—	1	2	4	4	22	—	2
Virginia .....	—	4	7	351	44	1	17	33	18	419	11	363
West Virginia .....	—	—	6	142	184	—	2	6	53	1,530	16	197
North Carolina .....	—	1	—	4	27	1	20	21	NN	NN	12	184
South Carolina .....	—	1	11	48	177	—	7	13	12	288	8	72
Georgia .....	—	—	17	35	122	—	17	3	3	20	1	7
Florida .....	—	3	15	246	957	1	24	35	72	1,522	55	657
EAST SOUTH CENTRAL .....	—	2	34	495	900	3	60	56	185	2,509	34	955
Kentucky .....	—	—	17	333	468	1	24	19	44	756	11	334
Tennessee .....	—	—	15	129	169	—	20	21	61	975	14	339
Alabama .....	—	2	—	—	120	1	11	10	66	336	5	120
Mississippi .....	—	—	2	33	143	1	5	6	14	442	4	162
WEST SOUTH CENTRAL .....	1	9	12	532	1,065	7	105	80	124	2,503	66	1,220
Arkansas *	—	—	3	62	10	1	12	7	18	204	2	95
Louisiana .....	1	2	2	61	69	—	21	23	2	50	6	83
Oklahoma .....	—	1	1	39	9	3	10	6	9	272	1	150
Texas .....	—	6	6	370	977	3	62	44	95	1,977	57	892
MOUNTAIN .....	—	7	11	432	1,265	3	16	12	84	1,945	55	1,997
Montana .....	—	1	—	12	12	1	4	2	8	172	19	421
Idaho .....	—	—	5	189	16	—	1	3	2	101	2	19
Wyoming .....	—	—	—	10	1	—	—	1	4	417	—	5
Colorado .....	—	1	1	113	382	1	3	2	24	266	31	1,337
New Mexico .....	—	1	5	97	84	1	3	1	45	767	2	137
Arizona .....	—	4	—	10	624	—	2	1	—	140	—	15
Utah .....	—	—	—	1	146	—	1	1	1	75	1	60
Nevada .....	—	—	—	—	—	—	2	1	—	7	—	3
PACIFIC .....	1	23	148	1,281	3,137	6	112	120	275	6,294	152	2,701
Washington .....	—	—	86	543	718	—	7	11	52	818	24	415
Oregon .....	1	2	21	327	36	2	10	10	66	1,241	79	514
California .....	—	18	40	402	2,298	4	91	95	127	3,609	48	1,754
Alaska .....	—	2	—	—	11	—	4	1	23	468	1	2
Hawaii .....	—	1	1	9	74	—	—	3	7	158	—	16
Guam *	—	—	—	3	2	—	—	7	—	4	—	2
Puerto Rico .....	—	—	148	1,169	322	—	4	2	27	392	1	19
Virgin Islands .....	—	—	—	1	1	—	—	2	4	13	—	1

\*Delayed reports: Measles: Me. 1, N.H. 5

Mumps: Me. 26, N.H. 2, Ark. 5, Guam 2

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# IMMUNIZATIONS AND PROPHYLAXIS RECOMMENDED BY PUBLIC HEALTH SERVICE

The following recommendations are based on decisions reached by the Public Health Service Advisory Committee on Immunization Practices

COUNTRY	Polio <sup>1</sup>	Typhoid <sup>2</sup>	Hepatitis <sup>3</sup>	Malaria <sup>4</sup>	COUNTRY	Polio <sup>1</sup>	Typhoid <sup>2</sup>	Hepatitis <sup>3</sup>	Malaria <sup>4</sup>
AFARS AND ISSAS	X	X	X		ENGLAND				
AFGHANISTAN	X	X	X	X	EQUATORIAL GUINEA	X	X	X	X
ALBANIA					ETHIOPIA	X	X	X	X
ALGERIA	X	X	X	X	EL LICE ISLANDS	X	X	X	
ANGOLA	X	X	X	X	FALKLAND ISLANDS			X	
ANGUILLA	X				FAROE ISLANDS				
ANTIGUA	X				FIJI	X	X	X	
ARGENTINA	X	X		X	FINLAND				
AUSTRALIA					FRANCE				
AUSTRIA					FRENCH GUIANA	X	X	X	X
AZORES					FRENCH POLYNESIA	X	X	X	
BAHAMAS	X				GABON	X	X	X	X
BAHRAIN	X	X	X	X	GAMBIA	X	X	X	X
BANGLADESH	X	X	X	X	GERMANY, EASTERN				
BARBADOS	X				GERMANY, FED. REP.				
BELGIUM					GHANA	X	X	X	X
BERMUDA	X				GIBRALTAR				
BOLIVIA	X	X	X	X	GILBERT ISLANDS	X	X	X	
BOTSWANA	X	X	X	X	GREECE				
BRAZIL	X	X	X	X	GREENLAND				
BRITISH HONDURAS	X	X	X	X	GRENADA	X			
BRUNEI	X	X	X		GUADELOUPE	X			
BULGARIA					GUAM				
BURMA	X	X	X	X	GUATEMALA	X	X	X	X
BURUNDI	X	X	X	X	GUINEA	X	X	X	X
CAMEROON	X	X	X	X	GUYANA	X	X	X	X
CANADA					HAITI	X	X		X
CANARY ISLANDS	X	X			HONDURAS	X	X	X	X
CAPE VERDE ISLANDS	X	X		X	HONG KONG	X	X		X
CAYMAN ISLANDS	X				HUNGARY				
CENTRAL AFRICAN REPUBLIC	X	X	X	X	ICELAND				
CEYLON (now SRI LANKA)	X	X	X	X	INDIA	X	X	X	X
CHAD	X	X	X	X	INDONESIA	X	X	X	X
CHILE	X	X			IRAN	X	X	X	X
CHINA (TAIWAN)	X	X	X		IRAQ	X	X	X	X
CHRISTMAS IS. (INDIAN OC.)	X	X			IRELAND				
COLOMBIA	X	X	X	X	ISRAEL				
COMORO ARCHIPELAGO	X	X	X	X	ITALY				
CONGO	X	X	X	X	IVORY COAST	X	X	X	X
COOK ISLANDS	X	X			JAMAICA	X			
COSTA RICA	X	X	X	X	JAPAN	X	X		
CUBA	X				JORDAN	X	X	X	X
CYPRUS					KENYA	X	X	X	X
CZECHOSLOVAKIA					KHMER REP. (CAMBODIA)	X	X	X	X
DAHOMEY	X	X	X	X	KOREA	X	X	X	X
DENMARK					KUWAIT	X	X	X	
DOMINICA	X				LAOS	X	X	X	X
DOMINICAN REPUBLIC	X			X	LEBANON	X	X	X	
ECUADOR	X	X	X	X	LESOTHO	X	X	X	
EGYPT	X	X	X	X	LIBERIA	X	X	X	X
EL SALVADOR	X	X	X	X	LIBYAN ARAB REP.	X	X	X	X

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<sup>2</sup>Typhoid — Only supplementary to good health practices such as avoiding uncooked food and impure water. Vaccination is not a justifiable routine for short-term tourists to urban areas but may be beneficial for long-term travelers to rural areas.

<sup>3</sup>Hepatitis prophylaxis — For travelers who plan to stay in the country three months or more.

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# IMMUNIZATIONS AND PROPHYLAXIS RECOMMENDED BY PUBLIC HEALTH SERVICE (Continued)

COUNTRY	Polio <sup>1</sup>	Typhoid <sup>2</sup>	Hepatitis <sup>3</sup>	Malaria <sup>4</sup>	COUNTRY	Polio <sup>1</sup>	Typhoid <sup>2</sup>	Hepatitis <sup>3</sup>	Malaria <sup>4</sup>
LIECHTENSTEIN					RHODESIA	X	X		X
LUXEMBOURG					ROMANIA				
MACAO	X	X	X		RUSSIA (USSR)				
MADAGASCAR	X	X	X	X	RWANDA	X	X	X	X
MADEIRA	X	X			RYUKYU ISLANDS	X		X	
MALAWI	X	X	X	X	SAMOA, AMERICAN	X	X	X	
MALAYSIA	X	X	X	X	SAMOA, WESTERN	X	X	X	
MALDIVES	X	X	X	X	SAO TOME & PRINCIPE	X	X	X	X
MALI	X	X	X	X	SAUDI ARABIA	X	X	X	X
MALTA					SCOTLAND				
MARTINIQUE	X				SENEGAL	X	X	X	X
MAURITANIA	X	X	X	X	SEYCHELLES	X	X	X	
MAURITIUS	X	X	X		SIERRA LEONE	X	X	X	X
MEXICO	X	X		X	SINGAPORE	X	X	X	X
MIQUELON					SOLOMON ISLANDS	X	X	X	X
MONACO					SOMALI	X	X	X	X
MONGOLIA	X	X			SOUTH AFRICA	X	X	X	X
MONTSERRAT	X				SPAIN				
MOROCCO	X	X	X	X	SPANISH SAHARA	X	X	X	X
MOZAMBIQUE	X	X	X	X	ST. HELENA	X	X	X	
NAMIBIA	X	X	X	X	ST. KITTS	X			
NAURU	X	X	X		ST. LUCIA	X			
NEPAL	X	X	X	X	ST. PIERRE				
NETHERLANDS					ST. VINCENT	X			
NETHERLANDS ANTILLES	X				SUDAN	X	X	X	X
NEVIS	X				SURINAM	X	X	X	X
NEW CALEDONIA	X	X	X		SWAZILAND	X	X	X	X
NEW GUINEA & PAPUA	X	X	X	X	SWEDEN				
NEW HEBRIDES	X	X	X	X	SWITZERLAND				
NEW ZEALAND	X				SYRIAN ARAB REP.	X	X	X	X
NICARAGUA	X	X	X	X	TANZANIA	X	X	X	X
NIGER	X	X	X	X	THAILAND	X	X	X	X
NIGERIA	X	X	X	X	TOGO	X	X	X	X
NORTHERN IRELAND					TONGA	X	X	X	
NORWAY					TRINIDAD & TOBAGO	X			
OMAN	X	X	X	X	TUNISIA	X	X	X	X
PACIFIC IS., TRUST TERR.		X	X		TURKEY	X	X	X	X
PAKISTAN	X	X	X	X	UGANDA	X	X	X	X
PANAMA	X	X	X	X	UPPER VOLTA	X	X	X	X
PANAMA CANAL ZONE					URUGUAY	X	X		
PARAGUAY	X	X	X	X	VENEZUELA	X	X	X	X
PERU	X	X	X	X	VIET-NAM	X	X	X	X
PHILIPPINES	X	X	X	X	VIRGIN ISLANDS (U.S.)				
PITCAIRN ISLAND	X	X	X		VIRGIN ISLANDS (U.K.)				
POLAND					WAKE ISLAND		X		
PORTUGAL					WALES				
PORTUGUESE GUINEA	X	X	X	X	YEMEN	X	X	X	X
PORTUGUESE TIMOR	X	X	X	X	YEMEN, DEMOCRATIC	X	X	X	X
PUERTO RICO					YUGOSLAVIA				
QATAR	X	X	X	X	ZAIRE	X	X	X	X
REUNION	X	X	X	X	ZAMBIA	X	X	X	X

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MAY 12, 1973 AND MAY 13, 1972 (19th WEEK) – Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
									GONOR- RHEA	SYPHILIS (Pri. & Sec.)		
	Cumulative 1973	1973	Cum. 1973		1973	Cum. 1973	1973	Cum. 1973	1973	1973	1973	Cum. 1973
UNITED STATES .....	25	701	11,547	21	5	307	9	30	17,856	469	94	1,331
NEW ENGLAND .....	1	18	386	—	1	4	—	1	349	5	3	74
Maine *	—	—	28	—	—	—	—	—	27	—	1	44
New Hampshire *	—	3	25	—	—	—	—	—	17	—	—	26
Vermont .....	—	2	10	—	—	—	—	—	12	—	1	2
Massachusetts .....	—	6	219	—	1	4	—	1	84	2	1	2
Rhode Island .....	1	2	29	—	—	—	—	—	32	—	—	—
Connecticut .....	—	5	75	—	—	—	—	—	177	3	—	—
MIDDLE ATLANTIC .....	4	110	2,370	—	—	21	—	1	2,666	91	—	8
Upstate New York .....	—	13	438	—	—	3	—	—	351	3	—	4
New York City .....	2	24	876	—	—	7	—	—	1,107	55	—	—
New Jersey .....	2	25	431	—	—	6	—	—	676	24	—	—
Pennsylvania .....	—	48	625	—	—	5	—	1	532	9	—	4
EAST NORTH CENTRAL .....	4	187	1,824	—	—	12	—	—	1,870	23	6	125
Ohio .....	1	36	564	—	—	5	—	—	602	7	—	18
Indiana .....	—	7	233	—	—	—	—	—	233	5	3	35
Illinois .....	2	45	504	—	—	2	—	—	247	7	3	37
Michigan .....	—	22	389	—	—	3	—	—	541	4	—	1
Wisconsin .....	1	77	134	—	—	2	—	—	247	—	—	34
WEST NORTH CENTRAL .....	4	15	435	2	—	8	—	1	861	7	33	376
Minnesota .....	—	5	58	—	—	3	—	—	157	4	10	125
Iowa *	—	—	40	—	—	—	—	—	113	—	8	89
Missouri .....	3	1	203	2	—	3	—	1	330	3	3	33
North Dakota .....	1	1	15	—	—	—	—	—	4	—	7	64
South Dakota .....	—	1	29	—	—	1	—	—	24	—	—	29
Nebraska .....	—	2	35	—	—	1	—	—	50	—	1	2
Kansas .....	—	5	55	—	—	—	—	—	183	—	4	34
SOUTH ATLANTIC .....	4	135	2,208	5	1	214	7	14	5,709	168	7	118
Delaware .....	—	2	25	—	—	—	—	1	74	—	—	—
Maryland .....	—	13	213	—	1	4	—	—	331	28	—	6
District of Columbia .....	—	3	114	—	—	—	—	—	2,076	19	—	—
Virginia .....	—	29	302	1	—	—	2	2	435	47	1	42
West Virginia *	—	4	119	—	—	—	—	—	81	—	3	14
North Carolina *	—	15	352	1	—	3	3	5	575	16	—	—
South Carolina .....	—	18	223	—	—	1	2	4	443	18	—	1
Georgia .....	—	23	382	3	—	1	—	2	698	6	3	38
Florida .....	4	28	478	—	—	205	—	—	996	34	—	17
EAST SOUTH CENTRAL .....	3	65	1,005	5	1	5	—	4	1,237	36	10	262
Kentucky .....	1	8	263	1	—	1	—	—	173	13	9	140
Tennessee .....	1	28	293	3	1	2	—	2	462	7	1	92
Alabama .....	1	18	265	—	—	2	—	2	314	6	—	30
Mississippi .....	—	11	184	1	—	—	—	—	288	10	—	—
WEST SOUTH CENTRAL .....	4	74	1,173	9	—	6	2	8	2,246	77	25	256
Arkansas .....	—	8	130	3	—	1	—	—	178	2	5	65
Louisiana .....	2	8	217	—	—	—	—	—	528	33	3	16
Oklahoma .....	1	5	98	4	—	1	2	8	341	1	7	81
Texas .....	1	53	728	2	—	4	—	—	1,199	41	10	94
MOUNTAIN .....	—	7	372	—	—	2	—	—	550	18	—	11
Montana .....	—	1	10	—	—	—	—	—	47	—	—	—
Idaho .....	—	—	16	—	—	—	—	—	43	1	—	—
Wyoming *	—	—	7	—	—	—	—	—	7	1	—	—
Colorado .....	—	—	67	—	—	—	—	—	160	5	—	—
New Mexico .....	—	—	85	—	—	1	—	—	46	—	—	2
Arizona *	—	6	151	—	—	1	—	—	165	—	—	9
Utah .....	—	—	11	—	—	—	—	—	22	1	—	—
Nevada .....	—	—	25	—	—	—	—	—	60	10	—	—
PACIFIC .....	1	90	1,774	—	2	35	—	1	2,368	44	10	101
Washington .....	—	7	153	—	—	—	—	—	212	4	—	—
Oregon .....	—	5	97	—	—	2	—	1	154	—	—	—
California .....	1	75	1,375	—	1	32	—	—	1,928	40	8	95
Alaska *	—	—	47	—	—	—	—	—	56	—	2	6
Hawaii .....	—	3	102	—	1	1	—	—	18	—	—	—
Guam *	—	—	6	—	—	—	—	—	—	—	—	—
Puerto Rico .....	3	9	207	—	—	1	—	—	98	18	1	15
Virgin Islands .....	—	—	—	—	—	—	—	—	8	—	—	—

\*Delayed reports: TB: Iowa delete 1, N.C. delete 2, Wyo. delete 3, Guam 1

RMSF: Ark. delete 1

Gonorrhea: N.H. 4, Guam 15

Syphilis: Alaska 1

Rabies: Me. delete 1, W. Va. 1, Ariz. 3

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING MAY 12, 1973

Week No.  
19

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	652	410	24	16	SOUTH ATLANTIC	1,326	698	61	56
Boston, Mass.	218	127	12	6	Atlanta, Ga.	133	58	9	4
Bridgeport, Conn.	56	35	—	—	Baltimore, Md.	251	128	10	2
Cambridge, Mass.	20	14	—	1	Charlotte, N. C.	63	35	6	—
Fall River, Mass.	29	25	1	1	Jacksonville, Fla.	69	31	3	1
Hartford, Conn.	67	42	3	1	Miami, Fla.	111	68	3	9
Lowell, Mass.	30	23	—	1	Norfolk, Va.	66	31	7	2
Lynn, Mass.	12	7	—	—	Richmond, Va.	93	45	11	5
New Bedford, Mass.	25	22	—	—	Savannah, Ga.	47	24	2	5
New Haven, Conn.	40	19	1	—	St. Petersburg, Fla.	94	77	1	6
Providence, R. I.	37	23	2	2	Tampa, Fla.	80	45	1	10
Somerville, Mass.	11	8	—	1	Washington, D. C.	270	131	6	11
Springfield, Mass.	30	22	1	—	Wilmington, Del.	49	25	2	1
Waterbury, Conn.	40	25	2	—	EAST SOUTH CENTRAL	658	360	42	38
Worcester, Mass.	37	18	2	3	Birmingham, Ala.	108	63	3	4
MIDDLE ATLANTIC	3,214	1,896	106	117	Chattanooga, Tenn.	68	34	4	13
Albany, N. Y.	54	30	2	3	Knoxville, Tenn.	42	29	—	1
Allentown, Pa.	25	17	—	1	Louisville, Ky.	92	55	2	10
Buffalo, N. Y.	146	89	4	9	Memphis, Tenn.	155	77	16	2
Camden, N. J.	49	30	3	2	Mobile, Ala.	52	28	4	—
Elizabeth, N. J.	45	29	—	1	Montgomery, Ala.	34	15	1	5
Erie, Pa.	33	27	1	7	Nashville, Tenn.	107	59	12	3
Jersey City, N. J.	51	33	2	1	WEST SOUTH CENTRAL	1,312	712	57	48
Newark, N. J.	64	33	4	5	Austin, Tex.	48	28	2	5
New York City, N. Y. †	1,535	911	49	53	Baton Rouge, La.	40	20	3	—
Paterson, N. J.	47	29	3	1	Corpus Christi, Tex.	34	13	4	—
Philadelphia, Pa.	524	274	11	7	Dallas, Tex.	189	107	5	—
Pittsburgh, Pa.	207	116	8	9	El Paso, Tex.	57	29	4	7
Reading, Pa.	43	38	—	1	Fort Worth, Tex.	93	55	3	2
Rochester, N. Y.	114	80	2	7	Houston, Tex.	282	139	9	7
Schenectady, N. Y.	31	19	2	3	Little Rock, Ark.	61	32	6	3
Scranton, Pa.	40	23	—	—	New Orleans, La.	147	77	10	4
Syracuse, N. Y.	103	64	9	3	Oklahoma City, Okla.*	92	53	4	2
Trenton, N. J.	45	16	5	1	San Antonio, Tex.	119	62	4	5
Utica, N. Y.	26	18	1	—	Shreveport, La.	78	50	1	5
Yonkers, N. Y.	32	20	—	3	Tulsa, Okla.	72	47	2	8
EAST NORTH CENTRAL	2,373	1,390	102	65	MOUNTAIN	530	311	22	19
Akron, Ohio	60	34	4	—	Albuquerque, N. Mex.	60	34	2	8
Canton, Ohio	35	18	2	3	Colorado Springs, Colo.	30	16	2	2
Chicago, Ill.	615	331	15	13	Denver, Colo.	110	65	6	3
Cincinnati, Ohio	148	91	9	4	Las Vegas, Nev.	29	14	—	—
Cleveland, Ohio	147	81	8	3	Ogden, Utah	12	9	1	1
Columbus, Ohio	138	73	14	1	Phoenix, Ariz.	125	67	5	1
Dayton, Ohio	124	86	5	2	Pueblo, Colo.	24	17	—	2
Detroit, Mich.	325	175	18	10	Salt Lake City, Utah	54	35	4	2
Evansville, Ind.	41	31	—	2	Tucson, Ariz.	86	54	2	—
Fort Wayne, Ind.	49	31	4	7	PACIFIC	1,577	961	42	44
Gary, Ind.	27	18	—	—	Berkeley, Calif.	16	10	—	—
Grand Rapids, Mich.	73	48	—	6	Fresno, Calif.	56	29	4	1
Indianapolis, Ind.	147	85	6	1	Glendale, Calif.	16	11	—	1
Madison, Wis.	39	22	1	5	Honolulu, Hawaii	37	16	4	—
Milwaukee, Wis.	112	78	3	—	Long Beach, Calif.	94	61	1	1
Peoria, Ill.	32	13	7	—	Los Angeles, Calif.	460	281	11	12
Rockford, Ill.	42	26	4	2	Oakland, Calif.	75	48	3	2
South Bend, Ind.	66	44	1	5	Pasadena, Calif.	29	22	—	1
Toledo, Ohio	103	71	1	1	Portland, Oreg.	158	101	6	7
Youngstown, Ohio	50	34	—	—	Sacramento, Calif.	62	37	2	—
WEST NORTH CENTRAL	726	476	17	26	San Diego, Calif.	115	71	1	1
Des Moines, Iowa	48	34	1	—	San Francisco, Calif.	205	125	1	7
Duluth, Minn.	34	25	—	3	San Jose, Calif.	45	23	1	1
Kansas City, Kans.	28	18	—	3	Seattle, Wash.	111	72	3	5
Kansas City, Mo.	117	81	2	3	Spokane, Wash.	66	35	5	4
Lincoln, Nebr.	35	25	—	3	Tacoma, Wash.	32	19	—	1
Minneapolis, Minn.	90	57	3	6	Total	12,368	7,214	473	429
Omaha, Nebr.	52	34	2	—	Expected Number	12,563	7,200	534	428
St. Louis, Mo.	206	134	4	2	Cumulative Total (includes reported corrections for previous weeks)	257,772	153,474	9,429	12,268
St. Paul, Minn.	65	40	4	3					
Wichita, Kans.	51	28	1	3					

†Delayed report for week ending May 5, 1973

\*Estimate based on average percent of divisional total

## SMALLPOX — Continued

States of West Bengal, Uttar Pradesh, and Bihar. Urban areas, where smallpox programs have been generally less effective than in rural areas, have served as reservoirs of smallpox and disseminators of disease throughout the surrounding vicinity. Of greatest concern was the occurrence of a major epidemic in Calcutta, the largest outbreak in more than 10 years. The comparatively plentiful transport facilities in India have compounded the problem, as many persons have traveled during the incubation period thousands of miles across India and have reestablished foci of infection in smallpox-free areas. Epidemics, still incompletely reported, developed as far northwest as Jammu and Kashmir and as far east as the states bordering Burma. Efforts throughout India to strengthen the eradication program have been initiated, but without an even more substantial effort in the summer and fall, more serious epidemics could occur in 1974.

## Bangladesh

After 18 months of freedom from smallpox achieved through a successful eradication program, outbreaks developed in Bangladesh in February 1972, coincident with the return of smallpox-infected refugees from India. Initially, the outbreaks were largely confined to districts in the southwest of the country, where both national and WHO staff were mobilized in an effort to restrict the outbreaks to these areas.

Because of the large number of outbreaks and problems of transport and communication, effective containment proved difficult. In addition, the summer monsoon, a period which is usually associated with a substantial seasonal decline in smallpox incidence, was exceptionally light, and many foci persisted which might otherwise have spontaneously terminated. Finally, food shortages resulted in considerable population movement and spread of smallpox throughout the country. With recognition of the magnitude of the problem, the government mobilized 20,000 health workers. No definitive decline in incidence has yet occurred, but it is still early to measure the full impact of these efforts.

## Other Countries

In Botswana, 8 smallpox cases occurred in a geographically limited focus which had remained undetected for almost 5 months. Intensive containment measures have been taken and are continuing—the last known case had its onset in March 1973. Nepal has reported 17 cases as a result of 5 importations from India. An additional 8 cases which have recently occurred are under investigation as are 11 cases recently reported by Afghanistan. Single case importations also occurred in the French Territory of the Afars and the Issas, the United Kingdom, and Japan: 4 cases occurred in the United Kingdom as a result of a laboratory-acquired infection. (*Reported by the World Health Organization: Weekly Epidemiological Record, Vol. 48, No. 18, May 4, 1973.*)

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 EPIDEMIOLOGIC NOTES AND REPORTS  
 TYPHOID FEVER — Alabama

Between July 18 and August 23, 1972, 6 bacteriologically confirmed and 1 clinically suspect case of typhoid fever occurred among children in 3 communities in Alabama. The 5 persons who became ill in July all sought medical attention; 1 was initially diagnosed as having typhoid fever. The 2 cases which developed in August were in siblings of children who had previously been ill. The *Salmonella typhi* isolate from the 6 confirmed cases was subsequently identified as phage type E<sub>1</sub>.

Epidemiologic investigation revealed that the children were cousins and that the 5 who became ill in July had spent some time that summer at their grandmother's house in Autauga County, Alabama. Investigation of the house and its environs revealed a fly-infested wooden shack with an outdoor pit privy in disrepair. Water was obtained from a shallow open well. Bacteriologic analysis of water samples from the well revealed coliforms too numerous to count. Cultures of stool specimens from more than 50 family members and contacts were negative, and no carrier responsible for the outbreak could be discovered.

Control measures included treating patients, using special hospitalization funds obtained from the Autauga County Commission, educating families in basic sanitary principles, and making repairs to the grandmother's well.

Nine months later, the Cleveland, Ohio, Department of Health notified the Alabama State Department of Health that a known typhoid carrier was moving from Cleveland to Autauga County. Investigation initiated by the county's public health nurse supervisor revealed that the 70-year-old new-

comer was a sister of the children's grandmother and had visited her in Alabama on July 2-3. During her stay, she had had diarrhea and fecal incontinence, having soiled the floors of her bedroom and the living room. On the day of this incident, the 5 children who became ill later in July visited their grandmother and played on the floor. All 4 stool specimens from the typhoid carrier yielded *S. typhi*, phage type E<sub>1</sub>. (*Reported by Edna Earl Tucker, R.N., Public Health Nurse Supervisor, Marion S. Headley, Sanitarian, J. B. Dismukes, M.D., Health Officer, Autauga County Health Department; W. H. Till, M.D., general practitioner, Prattville, Alabama; Jay Renz, Director, Enteric Pathogens Section, Public Health Laboratory, Frederick S. Wolf, M.D., State Epidemiologist, Alabama State Department of Health; Rita Thomas, R.N., Public Health Nurse Supervisor, J. Glenn Smith Health Center, Marie C. Reed, R.N., and Jack Robertson, M.D., Director of Health and Public Welfare, Cleveland Department of Health; John H. Ackerman, M.D., State Epidemiologist, Ohio Department of Health; and an EIS Officer.*)

## Editorial Note

The source of this outbreak would not have been discovered without the alert utilization of the information provided by the Cleveland Department of Health. It is impossible in retrospect to evaluate the relative importance of fecal soilage of the floor, contamination of water, and the prevalence of flies and possible contamination of food in this outbreak. The 2 cases occurring in August probably represent secondary spread, but the precise means of transmission is unclear.

SURVEILLANCE SUMMARY  
SHIGELLA — United States, July-December 1972

Between July and December 1972, a total of 7,486 shigella isolations from humans were reported to CDC, for a national incidence rate of 40.6 isolations per 1 million population (Figure 1). This represents an increase of 1,174 (18.6%) over the 6,312 isolations reported for the preceding

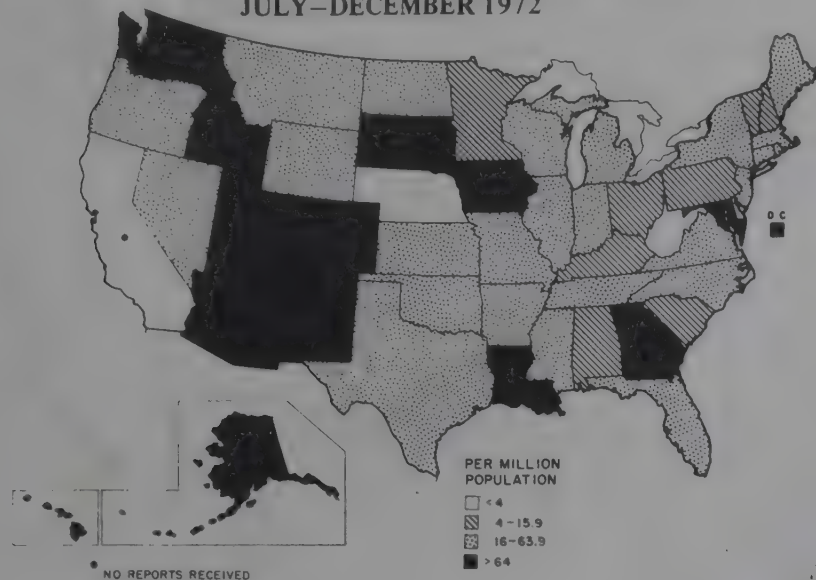
6 months and an increase of 282 (3.9%) over the 7,204 isolations reported for the corresponding months of 1971. The high degree of host specificity of shigella for man is illustrated by the fact that all except 19 of the infections reported in the last 6 months of 1972 occurred in man. The 19 nonhuman isolates were from other primates.

A total of 68.3% of reported isolations were from children under 10 years of age; the highest attack rate was in the 1-4 age group, and the second highest attack rate was in the < 1 year age group.

Of the 25 different serotypes reported, *Shigella sonnei* was the most common, accounting for approximately 79.2% of all isolations. The second most frequently isolated serotype was *S. flexneri* 2a (7.6%).

(Reported by the Enteric Diseases Section, Bacterial Diseases Branch, Epidemiology Program, CDC.)

Figure 1  
ATTACK RATES OF SHIGELLOSIS, BY STATE  
JULY-DECEMBER 1972



A copy of the original report from which these data were derived is available on request from

Center for Disease Control  
Attn: Shigella Surveillance Activity  
Epidemiology Program  
Atlanta, Georgia 30333

INTERNATIONAL NOTES  
QUARANTINE MEASURES

The following change should be made in the "Supplement—Vaccination Certificate Requirements for International Travel," MMWR, Vol. 22, No. 17:

New Caledonia and Dependencies

Smallpox—Delete the note.

Yellow fever—Insert code II.

The Morbidity and Mortality Weekly Report, circulation 30,500, is published by the Center for Disease Control, Atlanta, Ga.

Director, Center for Disease Control  
Director, Epidemiology Program, CDC  
Editor, MMWR

David J. Sencer, M.D.  
Philip S. Brachman, M.D.  
Michael B. Gregg, M.D.

The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to: Center for Disease Control  
Attn: Editor  
Morbidity and Mortality Weekly Report  
Atlanta, Georgia 30333

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PUBLIC HEALTH SERVICE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION  
CENTER FOR DISEASE CONTROL  
ATLANTA, GEORGIA 30333

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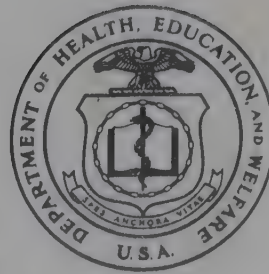
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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

DATE OF RELEASE: MAY 25, 1973 - ATLANTA, GEORGIA 30333

## EPIDEMIOLOGIC NOTES AND REPORTS COLLEGE-ASSOCIATED RUBELLA - Oklahoma

Between March 9 and April 5, 1973, St. Gregory's College (enrollment 450) in Shawnee, Oklahoma, reported 44 cases of a rash illness thought to be rubella. The illness was characterized by transient rash (84%), cervical or retroauricular lymphadenopathy (80%), conjunctivitis (91%), and fever (50%). Symptoms in most patients (40/44) developed in the 10-day period between March 9 and 18, 1973 (Figure 1).

Eleven cases were confirmed by a 4-fold or greater rise in the rubella HAI titer. Throat and rectal swab specimens from several students were negative for enteroviruses and adenoviruses.

Of the 450 persons enrolled, 367 are day students and 83 are adults attending evening classes, who have little contact with the other students. All cases were in day students (attack rate = 12%), and the attack rate in females was 1.3

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Isolation of New Influenza B Strains	175
Follow-Up on Technical Problems with FTA-ABS	
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times greater than in males. Extensive questioning of students failed to reveal any large social or athletic gathering which all ill students had attended in the 10- to 20-day period prior to the epidemic. However, all 44 students with rubella were dormitory residents and ate in the school dining room. Further investigation revealed that 1 student who works in the school dining room reportedly had a rash illness late in February.

A survey of a nearby medical facility and several com-

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	20th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 20 WEEKS		
	May 19, 1973	May 20, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	48	47	30	743	711	574
Brucellosis	1	5	5	51	49	55
Chickenpox	5,190	5,001	---	114,064	86,422	---
Diphtheria	2	4	4	74	44	66
Encephalitis, primary:						
Arthropod-borne and unspecified	25	15	17	398	312	388
Encephalitis, post-infectious	7	5	11	100	106	129
Hepatitis, serum (Hepatitis B)	169	211	138	2,955	3,691	2,639
Hepatitis, infectious (Hepatitis A)	1,104	1,130	1,089	19,848	22,115	21,810
Malaria	6	29	58	88	523	1,003
Measles (rubeola)	851	1,368	1,368	17,373	19,364	19,364
Meningococcal infections, total	28	21	48	685	678	1,309
Civilian	28	20	39	668	649	1,167
Military	—	1	3	17	29	140
Mumps	2,202	2,186	2,580	40,757	43,086	55,030
Rubella (German measles)	1,211	1,015	2,329	20,238	15,588	30,714
Tetanus	3	3	3	28	37	37
Tuberculosis, new active	710	825	---	12,283	12,693	---
Tularemia	2	—	2	23	41	38
Typhoid fever	11	7	7	320	102	99
Typhus, tick-borne (Rky. Mt. spotted fever)	16	14	11	48	45	32
Venereal Diseases:						
Gonorrhea	15,056	13,501	---	295,532	261,567	---
Syphilis, primary and secondary	535	446	---	10,288	9,135	---
Rabies in animals	77	102	80	1,409	1,754	1,544

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	1
Botulism: Pa. - 1, W. Va. - 8	9	Paralytic:	1
Congenital rubella syndrome: * Va. - 1	10	Psittacosis:	5
Leprosy: Hawaii - 4	46	Rabies in man:	—
Leptospirosis:	11	Trichinosis:	33
Plague:	—	Typhus, murine: Tex. - 1	8

\*Delayed reports: Congenital rubella syndrome: Guam 1

RUBELLA – Continued

Figure 1  
44 RUBELLA CASES, BY DATE OF ONSET  
ST. GREGORY'S COLLEGE, SHAWNEE, OKLAHOMA  
MARCH-APRIL 1973



munity physicians revealed 9 other cases of rubella among adolescents and adults outside the college campus; 1 of these patients had been ill prior to the outbreak at St. Gregory's.

Surveillance is being improved in Shawnee to document the effect of this outbreak on rubella incidence in the community, where 82% of children 1-11 years of age have been vaccinated against the disease through public programs.

(Reported by Mary Ann Burgess, R.N., Student Health Center, St. Gregory's College; A. Mitchell Bell, M.D., private

physician, Shawnee; Mark A. Roberts, Staff Epidemiologist, Stanley W. Ferguson, Ph.D., State Epidemiologist, and the Virology Section, Laboratory Division, Oklahoma State Department of Health; and an EIS Officer.)

Editorial Note

The explosive nature of this epidemic suggests that the disease was disseminated by an index case who served as a common source of infection. A comparable pattern of rubella transmission was recently reported in an epidemic from Hawaii (1).

A total of 12 states have reported outbreaks of rubella on college campuses in 1973. Most of these outbreaks were confined to the campus and did not involve elementary or preschool children, presumably because effective rubella immunization programs have been directed at young children. The apparent increase in reported rubella among high school and college students may represent a portion of the major rubella epidemic, now limited to unvaccinated groups, predicted for the early 1970s. Exposure and infection of pregnant women has occurred infrequently during the adolescent and college outbreaks investigated, but surveillance for this problem should be maintained.

Reference

1. Hattis RP, Halstead SB, Hermann KL, Witte JJ: Rubella in an immunized island population. JAMA 223:1019-1021, 1973

SUMMARY OF REPORTED CASES OF INFECTIOUS SYPHILIS

CASES OF PRIMARY AND SECONDARY SYPHILIS: By Reporting Area April 1973 and April 1972 – Provisional Data

Reporting Area	April		Cumulative Jan. – Apr.		Reporting Area	April		Cumulative Jan. – Apr.	
	1973	1972	1973	1972		1973	1972	1973	1972
NEW ENGLAND	101	93	410	313	EAST SOUTH CENTRAL	103	114	468	449
Maine	1	2	9	7	Kentucky	21	23	129	73
New Hampshire	—	1	5	4	Tennessee	43	42	147	180
Vermont	1	6	8	9	Alabama	9	15	41	54
Massachusetts	61	58	277	172	Mississippi	30	34	151	142
Rhode Island	1	3	8	13	WEST SOUTH CENTRAL	269	262	930	1,033
Connecticut	37	23	103	108	Arkansas	8	20	60	93
MIDDLE ATLANTIC	412	457	1,940	1,831	Louisiana	76	56	260	260
Upstate New York	20	40	126	151	Oklahoma	21	5	73	35
New York City	264	309	1,233	1,234	Texas	164	181	537	645
Pa. (Excl. Phila.)	20	6	94	52	MOUNTAIN	42	51	209	169
Philadelphia	34	31	153	118	Montana	—	—	—	1
New Jersey	74	71	334	276	Idaho	—	1	5	2
EAST NORTH CENTRAL	193	229	787	909	Wyoming	—	2	2	7
Ohio	22	23	94	115	Colorado	16	9	84	21
Indiana	45	28	119	72	New Mexico	1	10	24	39
Downstate Illinois	6	9	59	54	Arizona	14	20	63	69
Chicago	68	98	296	369	Utah	1	2	7	9
Michigan	44	66	185	285	Nevada	10	7	24	21
Wisconsin	8	5	34	14	PACIFIC	327	286	1,453	1,129
WEST NORTH CENTRAL	32	20	108	91	Washington	9	11	50	38
Minnesota	13	3	40	9	Oregon	2	6	18	17
Iowa	5	5	13	15	California	308	267	1,354	1,061
Missouri	12	11	38	49	Alaska	1	—	6	4
North Dakota	—	—	1	—	Hawaii	7	2	25	9
South Dakota	—	—	1	—	U.S. TOTAL	2,023	2,026	8,513	7,983
Nebraska	—	1	1	6					
Kansas	2	—	14	12	TERRITORIES	67	68	280	292
SOUTH ATLANTIC	544	514	2,208	2,059	Puerto Rico	64	60	268	263
Delaware	11	6	31	22	Virgin Islands	3	8	12	29
Maryland	59	79	255	305					
District of Columbia	62	67	253	266					
Virginia	67	33	250	136					
West Virginia	2	4	7	11					
North Carolina	47	41	210	179					
South Carolina	34	50	213	174					
Georgia	108	90	406	445					
Florida	154	144	583	521					

Note: Cumulative Totals include revised and delayed reports through previous months.

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MAY 19, 1973 AND MAY 20, 1972 (20th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES . . . . .	48	1	5,190	2	74	25	15	7	169	1,104	1,130
NEW ENGLAND . . . . .	—	—	922	—	2	2	2	—	2	52	86
Maine * . . . . .	—	—	8	—	—	—	—	—	—	2	13
New Hampshire * . . . . .	—	—	40	—	—	—	—	—	—	3	4
Vermont . . . . .	—	—	25	—	—	—	—	—	—	7	7
Massachusetts . . . . .	—	—	387	—	—	—	1	—	1	21	37
Rhode Island . . . . .	—	—	128	—	2	—	—	—	—	2	3
Connecticut . . . . .	—	—	334	—	—	2	1	—	1	17	22
MIDDLE ATLANTIC . . . . .	9	—	409	—	—	3	2	1	26	136	206
Upstate New York . . . . .	3	—	8	—	—	—	1	—	5	51	44
New York City . . . . .	1	—	193	—	—	—	1	—	10	34	44
New Jersey . . . . .	3	—	NN	—	—	2	—	—	3	31	45
Pennsylvania . . . . .	2	—	208	—	—	1	—	1	8	20	73
EAST NORTH CENTRAL . . . . .	8	—	2,022	—	—	8	5	2	21	181	174
Ohio * . . . . .	—	—	313	—	—	1	—	—	4	31	44
Indiana . . . . .	2	—	135	—	—	1	—	—	—	15	15
Illinois . . . . .	4	—	—	—	—	1	2	2	4	46	37
Michigan . . . . .	2	—	642	—	—	3	3	—	12	83	69
Wisconsin * . . . . .	—	—	932	—	—	2	—	—	1	6	9
WEST NORTH CENTRAL . . . . .	—	—	492	—	7	2	—	—	8	50	38
Minnesota . . . . .	—	—	38	—	—	—	—	—	4	3	5
Iowa . . . . .	—	—	312	—	—	—	—	—	—	1	7
Missouri . . . . .	—	—	61	—	—	2	—	—	3	36	18
North Dakota . . . . .	—	—	35	—	—	—	—	—	—	—	2
South Dakota . . . . .	—	—	—	—	7	—	—	—	—	2	—
Nebraska . . . . .	—	—	10	—	—	—	—	—	1	—	—
Kansas . . . . .	—	—	36	—	—	—	—	—	—	8	6
SOUTH ATLANTIC . . . . .	7	—	398	—	—	5	3	—	19	219	181
Delaware . . . . .	—	—	40	—	—	—	—	—	—	1	6
Maryland . . . . .	—	—	23	—	—	1	—	—	1	17	12
District of Columbia . . . . .	—	—	—	—	—	1	—	—	—	2	1
Virginia . . . . .	3	—	31	—	—	2	1	—	—	15	28
West Virginia * . . . . .	1	—	220	—	—	—	—	—	—	9	1
North Carolina . . . . .	—	—	NN	—	—	—	—	—	1	57	42
South Carolina . . . . .	—	—	78	—	—	—	—	—	2	10	14
Georgia . . . . .	—	—	6	—	—	1	—	—	—	13	14
Florida . . . . .	3	—	—	—	—	—	2	—	15	95	63
EAST SOUTH CENTRAL . . . . .	3	—	85	—	—	—	1	—	10	79	59
Kentucky . . . . .	—	—	40	—	—	—	1	—	—	27	6
Tennessee . . . . .	—	—	NN	—	—	—	—	—	4	42	37
Alabama . . . . .	3	—	44	—	—	—	—	—	5	2	12
Mississippi . . . . .	—	—	1	—	—	—	—	—	1	8	4
WEST SOUTH CENTRAL . . . . .	8	—	353	1	4	1	—	—	9	156	155
Arkansas * . . . . .	—	—	16	—	—	—	—	—	—	1	5
Louisiana * . . . . .	1	—	NN	—	—	—	—	—	5	10	20
Oklahoma . . . . .	1	—	55	—	—	1	—	—	1	37	30
Texas . . . . .	6	—	282	1	4	—	—	—	3	108	100
MOUNTAIN . . . . .	—	1	158	—	2	2	—	—	9	24	55
Montana . . . . .	—	1	27	—	—	—	—	—	1	3	4
Idaho . . . . .	—	—	—	—	—	—	—	—	1	3	8
Wyoming . . . . .	—	—	—	—	—	—	—	—	—	1	1
Colorado . . . . .	—	—	83	—	—	—	—	—	4	5	15
New Mexico . . . . .	—	—	37	—	2	2	—	—	2	8	17
Arizona * . . . . .	—	—	—	—	—	—	—	—	—	—	10
Utah . . . . .	—	—	11	—	—	—	—	—	1	3	—
Nevada . . . . .	—	—	—	—	—	—	—	—	—	1	—
PACIFIC . . . . .	13	—	351	1	59	2	2	4	65	207	176
Washington . . . . .	—	—	295	1	54	—	—	—	3	19	9
Oregon . . . . .	1	—	1	—	3	—	—	—	1	17	29
California . . . . .	11	—	—	—	2	2	2	4	59	165	127
Alaska . . . . .	—	—	22	—	—	—	—	—	2	—	1
Hawaii . . . . .	1	—	33	—	—	—	—	—	—	6	10
Guam * . . . . .	—	—	—	—	—	—	—	—	—	—	—
Puerto Rico . . . . .	—	—	15	—	—	—	—	—	3	12	14
Virgin Islands . . . . .	—	—	—	—	—	—	—	—	—	—	—

\*Delayed reports: Chickenpox: Me. 40, N.H. 10, Ark. 4, Guam 4  
Encephalitis, primary: Wis. 1  
Hepatitis B: Ohio 3, Ariz. 1

Hepatitis A: Me. 5, Ohio delete 3, W. Va. delete 1, Ark. 2,  
La. delete 1, Ariz. 24, Guam 1

## Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MAY 19, 1973 AND MAY 20, 1972 (20th WEEK) - Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	6	88	851	17,373	19,364	28	685	678	2,202	40,757	1,211	20,238
NEW ENGLAND .....	-	6	257	6,239	1,853	-	30	29	131	1,865	196	2,796
Maine *	-	-	-	20	181	-	-	3	2	148	4	59
New Hampshire *	-	-	5	746	171	-	6	1	7	151	9	320
Vermont .....	-	2	5	98	95	-	2	-	1	214	-	27
Massachusetts .....	-	2	132	3,406	311	-	11	15	30	618	107	1,582
Rhode Island .....	-	-	31	426	348	-	1	8	14	185	7	171
Connecticut .....	-	2	84	1,543	747	-	10	2	77	549	69	637
MIDDLE ATLANTIC .....	3	14	61	1,346	755	4	100	79	279	5,100	233	3,104
Upstate New York .....	2	8	19	351	96	1	36	20	NN	NN	40	271
New York City .....	-	1	31	683	162	1	19	23	158	3,028	17	300
New Jersey .....	-	1	8	158	456	2	23	18	29	1,157	159	2,313
Pennsylvania .....	1	4	3	154	41	-	22	18	92	915	17	220
EAST NORTH CENTRAL .....	-	11	332	5,745	7,616	9	85	95	388	11,060	271	4,366
Ohio .....	-	2	4	216	200	2	38	33	48	2,047	7	540
Indiana .....	-	1	30	482	1,044	-	2	10	28	834	39	799
Illinois .....	-	6	90	1,276	2,753	4	16	21	-	1,880	76	698
Michigan .....	-	2	156	2,939	1,331	3	25	27	174	3,097	91	1,159
Wisconsin *	-	-	52	832	2,288	-	4	4	138	3,202	58	1,170
WEST NORTH CENTRAL .....	-	4	26	342	766	1	57	56	153	3,767	34	1,074
Minnesota .....	-	1	-	15	14	-	-	11	-	72	6	187
Iowa .....	-	-	15	224	523	-	11	2	96	2,457	12	162
Missouri .....	-	1	1	23	145	1	29	18	15	451	8	236
North Dakota .....	-	1	8	52	42	-	3	-	4	54	4	237
South Dakota .....	-	-	-	-	4	-	3	2	-	11	-	21
Nebraska .....	-	-	-	3	17	-	4	7	3	83	-	136
Kansas .....	-	1	2	25	21	-	7	16	35	639	4	95
SOUTH ATLANTIC .....	2	11	32	864	1,609	4	109	145	343	4,806	50	1,547
Delaware .....	-	-	-	5	16	-	-	1	7	212	-	7
Maryland .....	-	-	-	1	12	1	17	24	22	479	-	8
District of Columbia .....	-	-	2	2	2	-	2	4	5	27	-	2
Virginia .....	-	4	3	354	46	2	19	36	46	465	6	369
West Virginia .....	-	-	-	142	193	-	2	6	90	1,620	26	223
North Carolina .....	2	3	-	4	28	-	20	21	NN	NN	1	185
South Carolina .....	-	1	2	50	181	1	8	14	27	315	-	72
Georgia .....	-	-	1	36	123	-	17	3	5	25	-	7
Florida .....	-	3	24	270	1,008	-	24	36	141	1,663	17	674
EAST SOUTH CENTRAL .....	-	2	18	513	918	5	65	58	323	2,832	40	995
Kentucky .....	-	-	4	337	468	-	24	20	172	928	10	344
Tennessee .....	-	-	12	141	177	3	23	22	141	1,116	15	354
Alabama .....	-	2	-	-	124	2	13	10	9	345	14	134
Mississippi .....	-	-	2	35	149	-	5	6	1	443	1	163
WEST SOUTH CENTRAL .....	-	9	10	543	1,130	1	106	83	139	2,642	45	1,267
Arkansas *	-	-	-	63	10	-	12	7	7	211	5	102
Louisiana .....	-	2	1	62	73	-	21	23	-	50	3	86
Oklahoma .....	-	1	1	40	9	-	10	6	19	291	5	155
Texas .....	-	6	8	378	1,038	1	63	47	113	2,090	32	924
MOUNTAIN .....	-	7	18	403	1,339	2	19	12	61	2,006	101	2,147
Montana .....	-	1	-	12	12	-	4	2	10	182	2	423
Idaho .....	-	-	-	189	16	-	1	3	2	103	1	20
Wyoming .....	-	-	-	10	1	-	-	1	-	417	-	5
Colorado *	-	1	16	81	389	2	5	2	21	287	76	1,461
New Mexico .....	-	1	2	99	89	-	3	1	28	795	21	158
Arizona *	-	4	-	11	683	-	3	1	-	140	-	16
Utah .....	-	-	-	1	149	-	1	1	-	75	1	61
Nevada .....	-	-	-	-	-	-	2	1	-	7	-	3
PACIFIC .....	1	24	97	1,378	3,378	2	114	121	385	6,679	241	2,942
Washington .....	-	-	50	593	791	-	7	11	72	890	29	444
Oregon .....	-	2	18	345	37	-	10	10	50	1,291	102	616
California .....	1	19	28	430	2,459	2	93	96	176	3,785	108	1,862
Alaska .....	-	2	-	-	11	-	4	1	82	550	-	2
Hawaii .....	-	1	1	10	80	-	-	3	5	163	2	18
Guam *	-	-	-	3	2	-	-	8	-	5	-	5
Puerto Rico .....	-	-	86	1,255	350	-	4	2	33	425	-	19
Virgin Islands *	-	-	-	-	1	-	-	2	1	14	-	1

\*Delayed reports: Measles: Me. 1, N.H. 3, Ark. 1, Colo. delete 48,  
Ariz. 1, V.I. delete 1

Meningococcal infections: Wis. 1, Ariz. 1

Mumps: Me. 16, Guam 1

Rubella: Me. 14, Ark. 2, Colo. 48,  
Ariz. 1, Guam 3

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MAY 19, 1973 AND MAY 20, 1972 (20th WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES . . . . .	28	710	12,283	23	11	320	16	48	15,056	535	77	1,409
NEW ENGLAND . . . . .	1	25	411	—	1	5	—	1	554	11	2	76
Maine . . . . .	—	2	30	—	—	—	—	—	24	2	1	45
New Hampshire . . . . .	—	1	26	—	—	—	—	—	8	—	1	27
Vermont . . . . .	—	2	12	—	—	—	—	—	11	1	—	2
Massachusetts . . . . .	—	18	237	—	1	5	—	1	300	5	—	2
Rhode Island . . . . .	1	1	30	—	—	—	—	—	29	—	—	—
Connecticut . . . . .	—	1	76	—	—	—	—	—	182	3	—	—
MIDDLE ATLANTIC . . . . .	4	129	2,499	—	—	21	—	1	2,582	108	—	8
Upstate New York . . . . .	—	30	468	—	—	3	—	—	258	6	—	4
New York City . . . . .	2	38	914	—	—	7	—	—	1,548	77	—	—
New Jersey . . . . .	2	12	443	—	—	6	—	—	342	17	—	—
Pennsylvania . . . . .	—	49	674	—	—	5	—	1	434	8	—	4
EAST NORTH CENTRAL . . . . .	4	83	1,935	—	1	13	—	—	1,633	31	4	129
Ohio . . . . .	1	26	590	—	—	5	—	—	413	5	—	18
Indiana . . . . .	—	20	253	—	—	—	—	—	113	5	—	35
Illinois* . . . . .	2	12	544	—	—	2	—	—	358	7	—	37
Michigan . . . . .	—	25	414	—	1	4	—	—	577	11	1	2
Wisconsin . . . . .	1	—	134	—	—	2	—	—	172	3	3	37
WEST NORTH CENTRAL . . . . .	4	38	473	4	—	8	—	1	824	2	23	399
Minnesota . . . . .	—	2	60	—	—	3	—	—	198	2	8	133
Iowa . . . . .	—	3	43	—	—	—	—	—	142	—	8	97
Missouri . . . . .	3	22	225	4	—	3	—	1	220	—	1	34
North Dakota . . . . .	1	1	16	—	—	—	—	—	10	—	2	66
South Dakota . . . . .	—	2	31	—	—	1	—	—	48	—	1	30
Nebraska . . . . .	—	3	38	—	—	1	—	—	83	—	—	2
Kansas . . . . .	—	5	60	—	—	—	—	—	123	—	3	37
SOUTH ATLANTIC . . . . .	5	159	2,366	5	3	217	10	24	2,724	162	5	124
Delaware . . . . .	—	5	30	—	—	—	—	1	13	—	—	—
Maryland * . . . . .	—	10	223	—	—	4	—	—	229	24	—	7
District of Columbia . . . . .	—	3	117	—	—	—	—	—	333	15	—	—
Virginia . . . . .	—	27	329	1	—	—	4	6	375	57	1	43
West Virginia . . . . .	—	7	126	—	2	2	—	—	89	—	—	14
North Carolina* . . . . .	—	31	382	1	—	3	2	7	230	7	—	—
South Carolina . . . . .	—	7	230	—	1	2	—	4	336	24	—	1
Georgia . . . . .	1	19	401	3	—	1	4	6	172	10	3	41
Florida . . . . .	4	50	528	—	—	205	—	—	947	25	1	18
EAST SOUTH CENTRAL . . . . .	3	76	1,080	5	1	6	—	4	1,316	27	8	270
Kentucky * . . . . .	1	15	277	1	—	1	—	—	194	12	6	146
Tennessee . . . . .	1	28	321	3	1	3	—	2	468	7	2	94
Alabama . . . . .	1	23	288	—	—	2	—	2	341	2	—	30
Mississippi . . . . .	—	10	194	1	—	—	—	—	313	6	—	—
WEST SOUTH CENTRAL . . . . .	4	71	1,244	9	1	8	6	16	2,323	58	21	277
Arkansas* . . . . .	—	7	137	3	—	2	—	2	114	—	1	66
Louisiana * . . . . .	2	12	229	—	—	—	—	—	526	10	2	18
Oklahoma . . . . .	1	10	108	4	—	1	6	14	231	2	8	89
Texas . . . . .	1	42	770	2	1	5	—	—	1,452	46	10	104
MOUNTAIN . . . . .	—	19	391	—	—	3	—	—	502	12	—	11
Montana . . . . .	—	3	13	—	—	—	—	—	35	—	—	—
Idaho . . . . .	—	1	17	—	—	—	—	—	36	—	—	—
Wyoming . . . . .	—	—	7	—	—	—	—	—	8	3	—	—
Colorado . . . . .	—	8	75	—	—	—	—	—	135	—	—	—
New Mexico . . . . .	—	4	89	—	—	1	—	—	93	2	—	2
Arizona * . . . . .	—	1	152	—	—	2	—	—	133	5	—	9
Utah . . . . .	—	2	13	—	—	—	—	—	10	—	—	—
Nevada . . . . .	—	—	25	—	—	—	—	—	52	2	—	—
PACIFIC . . . . .	3	110	1,884	—	4	39	—	1	2,598	124	14	115
Washington . . . . .	—	8	161	—	—	—	—	—	218	1	—	—
Oregon . . . . .	—	5	102	—	—	2	—	1	119	3	1	1
California . . . . .	3	92	1,467	—	4	36	—	—	2,097	120	13	108
Alaska . . . . .	—	—	47	—	—	—	—	—	121	—	—	6
Hawaii . . . . .	—	5	107	—	—	1	—	—	43	—	—	—
Guam* . . . . .	—	—	12	—	—	—	—	—	—	—	—	—
Puerto Rico . . . . .	3	9	216	—	1	2	—	—	108	13	2	17
Virgin Islands . . . . .	—	—	—	—	—	—	—	—	2	—	—	—

\*Delayed reports: TB: Ill. 28, N.C. delete 1, Ky. delete 1, Guam 6

Typhoid: Ark. 1, Ariz. 1

RMSF: Ark. 2

Gonorrhea: La. delete 3, Guam 13

Syphilis: La. delete 1

Rabies: Md. 1

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING MAY 19, 1973

Week No.

20

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	717	446	20	39	SOUTH ATLANTIC	1,261	687	38	47
Boston, Mass.	213	128	8	15	Atlanta, Ga.	133	65	6	4
Bridgeport, Conn.	46	22	1	2	Baltimore, Md.	217	115	6	3
Cambridge, Mass.	36	22	—	4	Charlotte, N. C.	51	25	1	—
Fall River, Mass.	31	22	—	1	Jacksonville, Fla.	110	46	5	—
Hartford, Conn.	53	29	2	—	Miami, Fla.	113	67	1	1
Lowell, Mass.	28	14	—	1	Norfolk, Va.	65	38	1	6
Lynn, Mass.	23	15	1	—	Richmond, Va.	86	47	1	7
New Bedford, Mass.	24	18	—	—	Savannah, Ga.	33	20	1	3
New Haven, Conn.	55	30	2	1	St. Petersburg, Fla.	92	79	1	5
Providence, R. I.	55	34	3	7	Tampa, Fla.	81	45	4	12
Somerville, Mass.	12	10	1	1	Washington, D. C.	235	119	11	5
Springfield, Mass.	52	43	—	5	Wilmington, Del.	45	21	—	1
Waterbury, Conn.	41	27	—	—	EAST SOUTH CENTRAL	676	373	17	28
Worcester, Mass.	48	32	2	2	Birmingham, Ala.	113	64	2	1
MIDDLE ATLANTIC	3,104	1,804	90	108	Chattanooga, Tenn.	38	16	2	1
Albany, N. Y.	39	17	2	1	Knoxville, Tenn.	33	24	—	—
Allentown, Pa.	27	19	—	3	Louisville, Ky.	155	89	3	7
Buffalo, N. Y.	165	99	6	15	Memphis, Tenn.	119	67	2	1
Camden, N. J.	35	19	1	2	Mobile, Ala.	69	37	1	—
Elizabeth, N. J.	31	22	1	—	Montgomery, Ala.	48	17	3	7
Erie, Pa.	28	17	1	2	Nashville, Tenn.	101	59	4	11
Jersey City, N. J.	58	33	—	2	WEST SOUTH CENTRAL	1,253	664	75	31
Newark, N. J.	67	32	5	1	Austin, Tex.	48	26	1	—
New York City, N. Y. †	1,476	864	46	43	Baton Rouge, La.	67	36	8	—
Paterson, N. J.	46	26	2	1	Corpus Christi, Tex.	20	7	3	—
Philadelphia, Pa.	593	324	11	14	Dallas, Tex.	167	77	10	3
Pittsburgh, Pa.	151	87	2	6	El Paso, Tex.	63	30	3	2
Reading, Pa.	36	26	—	—	Fort Worth, Tex.	77	47	6	1
Rochester, N. Y.	127	78	7	11	Houston, Tex.	263	133	18	3
Schenectady, N. Y.	20	12	1	1	Little Rock, Ark.	65	31	7	2
Scranton, Pa.	28	17	—	—	New Orleans, La.	151	89	2	2
Syracuse, N. Y.	82	45	3	2	Oklahoma City, Okla.*	88	50	5	1
Trenton, N. J.	38	22	1	2	San Antonio, Tex.	145	74	9	7
Utica, N. Y.	24	19	1	1	Shreveport, La.	39	21	2	2
Yonkers, N. Y.	33	26	—	1	Tulsa, Okla.	60	43	1	8
EAST NORTH CENTRAL	2,474	1,409	105	73	MOUNTAIN	548	312	17	18
Akron, Ohio	78	42	8	—	Albuquerque, N. Mex.	53	26	—	4
Canton, Ohio	44	30	2	3	Colorado Springs, Colo.	34	19	1	4
Chicago, Ill.	665	363	39	18	Denver, Colo.	133	85	—	3
Cincinnati, Ohio	156	96	3	4	Las Vegas, Nev.	53	25	4	—
Cleveland, Ohio	211	118	3	7	Ogden, Utah	19	9	—	2
Columbus, Ohio	131	66	7	4	Phoenix, Ariz.	113	62	5	—
Dayton, Ohio	95	63	2	3	Pueblo, Colo.	15	8	—	3
Detroit, Mich.	332	183	14	12	Salt Lake City, Utah	58	32	6	—
Evansville, Ind.	34	20	—	1	Tucson, Ariz.	70	46	1	2
Fort Wayne, Ind.	39	25	1	2	PACIFIC	1,693	1,074	44	31
Gary, Ind.	36	13	4	1	Berkeley, Calif.	10	7	—	—
Grand Rapids, Mich.	45	30	4	2	Fresno, Calif.	64	41	—	1
Indianapolis, Ind.	175	98	2	6	Glendale, Calif.	29	23	1	1
Madison, Wis.	33	20	—	1	Honolulu, Hawaii	67	34	4	—
Milwaukee, Wis.	146	85	4	4	Long Beach, Calif.	114	76	—	2
Peoria, Ill.	33	19	2	1	Los Angeles, Calif.	570	347	19	11
Rockford, Ill.	29	15	2	1	Oakland, Calif.	97	65	3	1
South Bend, Ind.	35	22	1	1	Pasadena, Calif.	29	23	—	1
Toledo, Ohio	114	77	4	2	Portland, Oreg.	115	69	2	1
Youngstown, Ohio	43	24	3	—	Sacramento, Calif.	45	26	3	—
WEST NORTH CENTRAL	801	506	39	26	San Diego, Calif.	117	69	3	4
Des Moines, Iowa	58	33	2	1	San Francisco, Calif.	163	109	2	1
Duluth, Minn.	28	18	—	4	San Jose, Calif.	52	32	1	2
Kansas City, Kans.	34	17	2	2	Seattle, Wash.	135	93	4	5
Kansas City, Mo.	115	78	3	2	Spokane, Wash.	52	36	2	1
Lincoln, Nebr.	28	16	1	—	Tacoma, Wash.	34	24	—	—
Minneapolis, Minn.	101	67	6	3	Total	12,527	7,275	445	401
Omaha, Nebr.	116	65	10	—	Expected Number	12,504	7,153	536	417
St. Louis, Mo.	206	132	12	6	Cumulative Total (includes reported corrections for previous weeks)	270,240	160,702	9,871	12,659
St. Paul, Minn.	72	50	2	1					
Wichita, Kans.	43	30	1	7					

†Delayed report for week ending May 12, 1973

\*Estimate based on average percent of divisional total

CURRENT TRENDS  
ISOLATION OF NEW INFLUENZA B STRAINS

The isolation of influenza B viruses from sporadic cases occurring in Hong Kong in December 1972 and January 1973 has been reported previously (*Weekly Epidemiological Record*, Vol. 48, No. 13, 1973). These strains were found to contain hemagglutinins showing marked antigenic changes from the viruses isolated previously. Influenza B viruses similar to those isolated in Hong Kong were also recovered from sporadic cases in Australia. During the same period, influenza strains antigenically intermediate between the B/Hong Kong/5/72 strain and the previously prevalent strains were isolated in Hannover (Federal Republic of Germany) and during an epidemic in a boarding school in England. In late March and April 1973, 5 additional influenza B strains were isolated during local outbreaks in the Federal Republic of Germany. Two of these strains were of the "intermediate" type, and 3 were closely related to the older influenza B virus isolated between 1967 and 1971.

The cross reactions between the recent influenza B isolates in the hemagglutination-inhibition test are shown in Table 1. Antisera to previously prevalent strains failed to react significantly with the strains resembling B/Hong Kong/5/72, although such antisera reacted to some degree with the "intermediate" strains from England and the Federal Republic of Germany. B/Hong Kong/5/72 and B/Hong Kong/5/73 antisera also inhibited to some degree the "intermediate" European strains, but not the previously prevalent strains. Preliminary studies indicate that the antigenic variation involves only the hemagglutinin and not the neuraminidase antigen.

Serologic surveys on young adults in England and in the United States show that approximately 7% in England and 1% in the United States possess hemagglutinin-inhibiting antibody

titers of 1:20 or greater to the B/Hong Kong/5/72 strain. Such findings suggest that these populations have had little experience with influenza B viruses resembling B/Hong Kong/5/72. The results in Table 1 suggest that the influenza B strains in the present vaccines may not provide adequate protection against strains resembling B/Hong Kong/5/72. The recovery of strains resembling B/Hong Kong/5/72 from Hong Kong and Australia and "intermediate" strains from England and the Federal Republic of Germany may indicate that they are becoming prevalent, though the earlier strains are still being isolated. A strain which has been passaged in eggs is available for distribution from the International Influenza Centers for use in vaccines.

Two strains identified as B/Hong Kong/5/72 have been isolated from infants in Birmingham, Wolverhampton, United Kingdom.

(Reported by the World Health Organization: *Weekly Epidemiological Record*, Vol. 48, No. 19, May 11, 1973; and Dr. Geoffrey Schild, Director, WHO World Influenza Centre, London, England.)

#### Editorial Note

The isolation of new and different strains of influenza B raises questions as to which strain, if either one, will become dominant worldwide and which should be incorporated into influenza vaccines. As yet, neither strain has been isolated in the United States, and it is too early to predict which, if either, is likely to be the prevailing strain in this country. Hopefully, increased surveillance in countries where the influenza season is now beginning may provide more information upon which to base sound recommendations for vaccine formulation and usage.

Table 1  
Antigenic Comparisons of Influenza B Virus Strains — Results of Hemagglutination-Inhibition Tests

Virus Strains	Post-Infection Ferret Serum Specimens									
	B/Lee/40	B/JHB/58	B/Sing/64	B/Roma/67	B/Vict/70	B/Mass/71	B/HK/1/72	B/Eng/847/73	B/HK/5/72	B/HK/5/73
B/Lee/40	960	40	20	20	20	20	<	<	<	<
B/JHB/33/58	80	160	320	80	20	40	20	<	<	<
B/Sing/3/64	40	40	1,920	320	640	640	320	<	<	<
B/Roma/1/67	<	<	160	640	640	1,280	480	20	<	<
B/Vic/98926/70	<	<	320	320	640	1,280	480	20	<	<
B/Mass/1/71	<	<	160	240	320	1,280	480	20	<	<
B/HK/1/72	<	<	80	240	320	1,280	480	—	<	<
B/HK/5/72	<	<	<	<	<	<	<	20	80	80
B/HK/5/73	<	<	<	<	<	20	<	—	320	480
B/HK/8/73	<	<	<	<	<	20	<	—	160	480
B/Vic/102/72	<	<	<	<	<	20	<	—	320	240
B/Eng/847/73	<	—	—	160	320	320	240	320	80	160
B/Hann/1/73	<	—	—	160	160	320	240	—	80	80
B/Hann/2/73	<	—	—	160	320	320	240	—	80	160

< = HI titers of less than 1:20

— = Not tested

CURRENT TRENDS  
FOLLOW-UP ON TECHNICAL PROBLEMS WITH  
FTA-ABS TEST FOR SYPHILIS – STABILITY OF  
LYOPHILIZED SORBENT

The Virginia Department of Health recently reported problems with the FTS-ABS test for syphilis, and a question concerning the stability of lyophilized sorbent was raised (MMWR, Vol. 22, No. 12). Studies with reference lyophilized FTA-ABS sorbent at CDC have been completed and show no differences between freshly rehydrated sorbent and sorbent rehydrated and stored in a liquid state at 4° to 8° C for 1 week. These studies were performed with coded sorbent and serum of varying degrees of reactivity including nonreactives. They indicate that this product is stable over the time period in which it is usually used. Studies by 2 commercial laboratories on the stability of liquid sorbent have shown that it has no measurable loss of activity when stored for periods of 24-36 months (1).

(Reported by the Venereal Disease Branch, State and Com-

munity Services Division, and Reagents Evaluation Unit, Biological Reagents Section, Scientific Resources Branch, Laboratory Division, CDC.)

**Reference**

1. Stout GW, Kellogg DS, Falcone VH, McGrew BE, Lewis JS: Preparation and standardization of the sorbent used in the fluorescent treponemal antibody-absorption (FTA-ABS) test. *Health Lab Sci* 4:5-8, 1967

**Addendum, Vol. 22, No. 16, p. 134**

In the article, "Syphilis – West Virginia," the following should be added to the credits: Ronald G. Bryant, Public Health Advisor, and Staff, Venereal Disease Control Section, West Virginia Department of Health, Charleston,

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to:

Center for Disease Control  
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PUBLIC HEALTH SERVICE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

CENTER FOR DISEASE CONTROL

ATLANTA, GEORGIA 30333

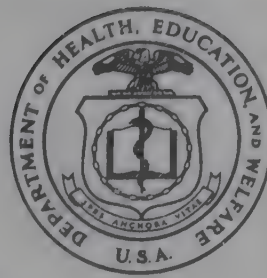
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# Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

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## EPIDEMIOLOGIC NOTES AND REPORTS

### SYPHILIS - Florida

In April 1972, a 28-year-old man living in a rural Florida county was diagnosed as having early latent syphilis by his private physician and was referred to the state health department for epidemiologic follow-up.

Intensive investigation of the contacts of the index case and of subsequent cases identified 32 new cases of syphilis involving 243 possible contacts in 9 Florida counties and 6 other states. Of these 243 contacts, 228 (93.8%) were located and examined. Preventive treatment was administered to 87 (78.3%) of the 111 clinically and serologically negative contacts. Twenty-seven of the 32 persons with early syphilis resided in the same county, which reported a total of 5 new cases of syphilis for the previous calendar year.

Through the health department's application of epidemiologic procedures and the cooperation of the private

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medical sector, this outbreak was brought under control. In addition to diagnosing, treating, and reporting disease in their own patients, private physicians also examined and treated others. The local hospital made available 24-hour emergency room service to anyone involved in the outbreak. This provided the health department field representatives with a diagnostic and treatment facility for night and weekend referrals.

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	21st WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 21 WEEKS		
	May 26, 1973	May 27, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	36	41	41	785	752	490
Brucellosis	3	4	4	54	53	60
Chickenpox	5,233	3,843	---	120,921	90,265	---
Diphtheria	2	2	2	84	46	67
Encephalitis, primary:						
Arthropod-borne and unspecified	24	17	17	423	329	407
Encephalitis, post-infectious	13	6	11	112	112	140
Hepatitis, serum (Hepatitis B)	132	188	134	3,091	3,879	2,773
Hepatitis, infectious (Hepatitis A)	900	1,144	934	20,881	23,259	22,744
Malaria	6	8	50	95	531	1,063
Measles (rubeola)	1,127	1,106	1,106	18,701	20,470	20,470
Meningococcal infections, total	22	17	44	713	695	1,353
Civilian	22	16	40	696	665	1,201
Military	---	1	3	17	30	143
Mumps	1,690	1,756	2,407	42,769	44,842	57,428
Rubella (German measles)	1,114	1,074	1,674	21,427	16,662	32,882
Tetanus	5	---	4	33	37	40
Tuberculosis, new active	629	598	---	12,854	13,291	---
Tularemia	2	1	1	25	42	42
Typhoid fever	9	14	5	329	116	103
Typhus, tick-borne (Rky. Mt. spotted fever)	16	9	10	65	54	42
Venereal Diseases:						
Gonorrhea	16,554	13,121	---	310,299	274,688	---
Syphilis, primary and secondary	479	511	---	10,768	9,646	---
Rabies in animals	80	80	62	1,495	1,834	1,606

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	1
Botulism:	9	Paralytic:	1
Congenital rubella syndrome: Va. - 1	11	Psittacosis:	5
Leprosy:	46	Rabies in man:	---
Leptospirosis: *	12	Trichinosis: Ill. - 1, Wash. - 1	35
Plague:	---	Typhus, murine: Texas - 1	9

\*Delayed reports: Leptospirosis: Wash. 1

### SYPHILIS — Continued

The case-finding technique known as the "cluster procedure" was used extensively to identify persons at risk beyond the immediate sexual contact group and resulted in 115 of these persons being brought to medical attention. Nine of the 115 were diagnosed as infected with syphilis

and were treated.

Since September 1972, epidemiologic surveillance of this and surrounding counties has yielded no new cases of syphilis.

(Reported by Ralph B. Hogan, M.D., State Epidemiologist, Florida Division of Health.)

### SURVEILLANCE SUMMARY FAMILY PLANNING SERVICES — United States, 1971

In 1971, data from clinics reporting to the Provisional Reporting System for Family Planning Services of the National Center for Health Statistics showed that a total of 798,129 women in the United States received family planning services and made 1,267,973 clinic visits. Approximately 25% of the women receiving services were teenagers (15-19 years), and nearly 60% were in their most active childbearing years (20-29 years). Women who had either 1 live birth or no live births accounted for 50% of those receiving contraceptive services, while women who had 5 or more births represented less than 12% of the total.

Over 65% of the women who chose a method of contraception chose oral contraceptives, while 16% chose an intrauterine device. Choice of method varied according to number of live births (Figure 1).

More whites than blacks used public family planning

clinics in 1971, but the rate of use was higher in the black population. While approximately 14% of all women served received Aid to Families with Dependent Children (AFDC), their rate of clinic utilization was higher than that of those who did not receive AFDC funds.

(Reported by the Family Statistics Branch, Division of Health Resources Statistics, National Center for Health Statistics; and the Family Planning Evaluation Branch, Epidemiology Program, CDC.)

A copy of the original report from which these data were derived is available on request from

Center for Disease Control  
Attn: Chief, Family Planning Evaluation Branch  
Epidemiology Program  
Atlanta, Georgia 30333

Figure 1  
CONTRACEPTIVE METHOD CHOSEN BY FAMILY PLANNING CLINIC PATIENTS,  
BY NUMBER OF LIVE BIRTHS — UNITED STATES, 1971

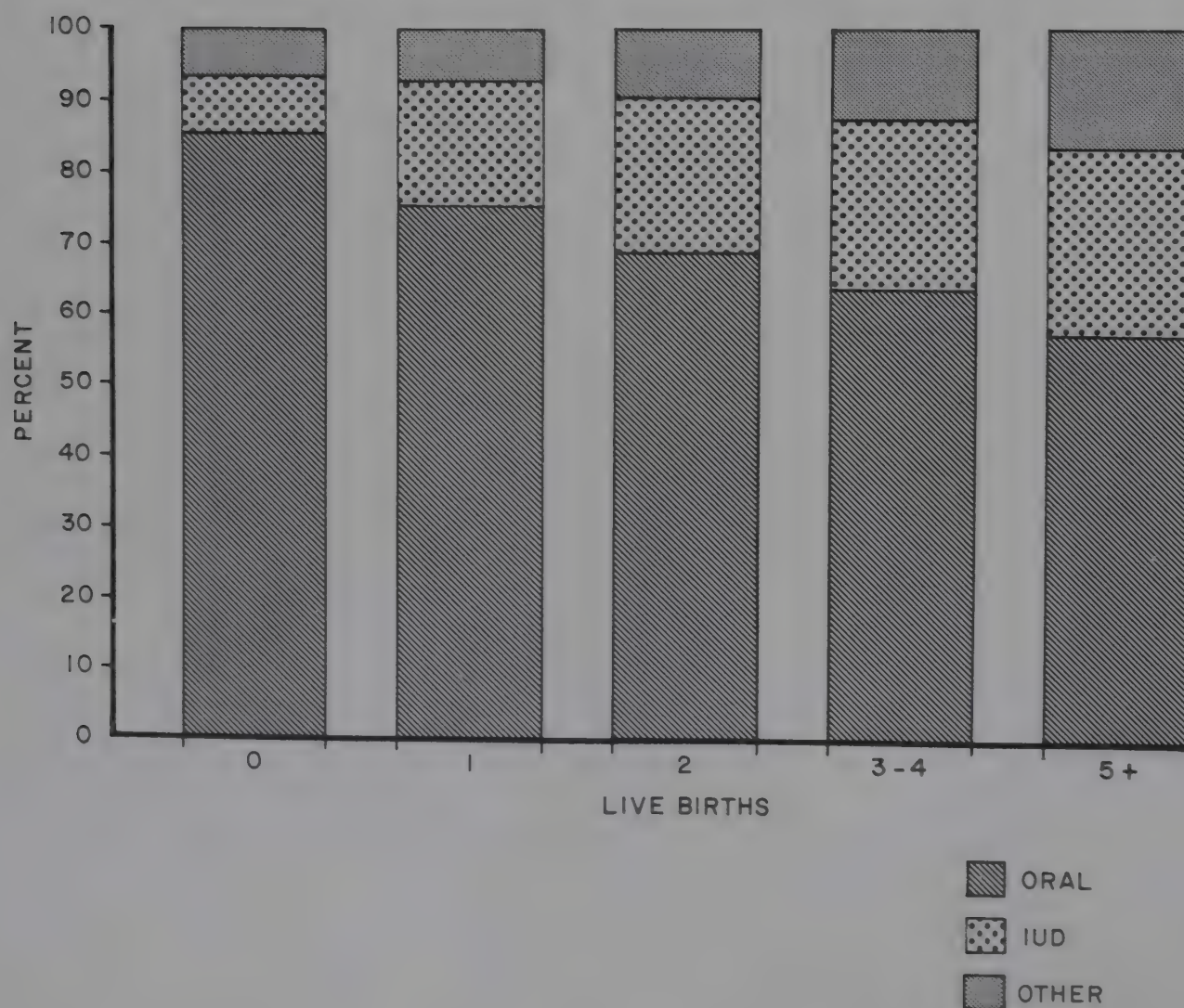


TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MAY 26, 1973 AND MAY 27, 1972 (21st WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES .....	36	3	5,233	2	84	24	17	13	132	900	1,144
NEW ENGLAND .....	-	-	782	-	2	2	-	-	2	64	70
Maine *	-	-	-	-	-	-	-	-	-	2	15
New Hampshire .....	-	-	20	-	-	-	-	-	-	9	10
Vermont .....	-	-	12	-	-	-	-	-	-	4	3
Massachusetts .....	-	-	518	-	-	2	-	-	1	30	21
Rhode Island .....	-	-	67	-	2	-	-	-	-	5	1
Connecticut .....	-	-	165	-	-	-	-	-	1	14	20
MIDDLE ATLANTIC .....	2	1	149	-	-	6	3	5	41	131	184
Upstate New York .....	2	-	2	-	-	3	1	3	12	43	69
New York City .....	-	-	140	-	-	1	-	-	10	16	38
New Jersey .....	-	-	NN	-	-	-	-	-	4	27	49
Pennsylvania .....	-	1	7	-	-	2	2	2	15	45	28
EAST NORTH CENTRAL .....	3	1	2,285	-	-	8	3	2	29	184	137
Ohio *	-	-	518	-	-	2	1	-	7	36	39
Indiana .....	-	-	116	-	-	-	-	-	-	10	8
Illinois .....	-	-	-	-	-	2	1	2	7	46	23
Michigan .....	3	-	791	-	-	4	1	-	13	86	66
Wisconsin .....	-	1	860	-	-	-	-	-	2	6	1
WEST NORTH CENTRAL .....	-	-	386	-	7	-	1	1	-	34	50
Minnesota .....	-	-	1	-	-	-	-	1	-	6	2
Iowa .....	-	-	272	-	-	-	-	-	-	5	9
Missouri .....	-	-	13	-	-	-	-	-	-	12	20
North Dakota .....	-	-	35	-	-	-	-	-	-	2	3
South Dakota .....	-	-	1	-	7	-	-	-	-	3	2
Nebraska .....	-	-	4	-	-	-	-	-	-	-	-
Kansas .....	-	-	60	-	-	-	1	-	-	6	14
SOUTH ATLANTIC .....	9	-	390	-	-	2	4	2	9	135	154
Delaware .....	-	-	10	-	-	-	-	-	-	-	3
Maryland .....	-	-	36	-	-	-	-	2	1	19	13
District of Columbia *	-	-	30	-	-	-	-	-	1	3	1
Virginia .....	1	-	29	-	-	1	-	-	2	11	29
West Virginia *	-	-	246	-	-	-	1	-	-	-	4
North Carolina .....	4	-	NN	-	-	1	2	-	1	28	20
South Carolina .....	1	-	39	-	-	-	-	-	-	5	13
Georgia .....	-	-	-	-	-	-	-	-	-	18	11
Florida .....	3	-	-	-	-	-	1	-	4	51	60
EAST SOUTH CENTRAL .....	4	-	193	-	-	1	2	1	18	86	78
Kentucky .....	-	-	172	-	-	-	-	-	6	29	42
Tennessee .....	2	-	NN	-	-	-	1	1	7	44	26
Alabama .....	1	-	17	-	-	1	1	-	3	13	9
Mississippi .....	1	-	4	-	-	-	-	-	2	-	1
WEST SOUTH CENTRAL .....	5	-	439	1	5	1	1	-	9	111	170
Arkansas *	-	-	13	-	-	-	-	-	-	1	1
Louisiana *	4	-	NN	-	-	1	-	-	4	21	5
Oklahoma .....	-	-	31	-	-	-	-	-	-	8	21
Texas .....	1	-	395	1	5	-	1	-	5	81	143
MOUNTAIN .....	1	1	151	-	2	-	1	-	3	28	56
Montana .....	1	-	18	-	-	-	-	-	1	2	3
Idaho .....	-	-	-	-	-	-	-	-	1	-	2
Wyoming .....	-	-	1	-	-	-	-	-	-	1	1
Colorado .....	-	-	87	-	-	-	-	-	-	17	15
New Mexico .....	-	1	38	-	2	-	-	-	-	6	-
Arizona .....	-	-	-	-	-	-	1	-	-	-	21
Utah .....	-	-	7	-	-	-	-	-	1	1	12
Nevada .....	-	-	-	-	-	-	-	-	-	1	2
PACIFIC .....	12	-	458	1	68	4	2	2	21	127	245
Washington *	2	-	405	1	63	-	-	-	-	24	19
Oregon .....	2	-	2	-	3	-	-	-	1	18	31
California .....	8	-	-	-	2	4	2	2	20	82	180
Alaska .....	-	-	2	-	-	-	-	-	-	1	6
Hawaii .....	-	-	49	-	-	-	-	-	-	2	9
Guam *	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	-	9	-	-	-	-	-	-	16	26
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: W. Va. 1

Chickenpox: Me. 29, D.C. 1, Guam 3

Encephalitis, post-infectious: La. delete 1

Hepatitis B: Me. 1, Ohio delete 1

Hepatitis A: Me. 4, Ohio 1, W. Va. delete 3, Ark. 5,  
Guam 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MAY 26, 1973 AND MAY 27, 1972 (21st WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES . . . . .	6	95	1,127	18,701	20,470	22	713	695	1,690	42,769	1,114	21,427
NEW ENGLAND . . . . .	2	8	247	6,493	2,013	2	32	30	69	1,942	260	3,058
Maine . *	—	—	—	27	215	—	—	3	—	156	—	61
New Hampshire . . . . .	—	—	2	748	176	—	6	2	8	159	7	327
Vermont . . . . .	—	2	1	99	95	—	2	—	1	215	3	30
Massachusetts . . . . .	1	3	153	3,559	353	—	11	15	25	643	183	1,765
Rhode Island . . . . .	—	—	41	467	367	—	1	8	13	198	2	173
Connecticut . . . . .	1	3	50	1,593	807	2	12	2	22	571	65	702
MIDDLE ATLANTIC . . . . .	—	14	146	1,492	776	2	102	81	217	5,317	251	3,355
Upstate New York . . . . .	—	8	67	418	104	2	38	21	NN	NN	8	279
New York City . . . . .	—	1	29	712	170	—	19	24	126	3,154	16	316
New Jersey . . . . .	—	1	44	202	458	—	23	18	21	1,178	205	2,518
Pennsylvania . . . . .	—	4	6	160	44	—	22	18	70	985	22	242
EAST NORTH CENTRAL . . . . .	2	13	581	6,326	8,121	4	90	97	529	11,589	263	4,629
Ohio . . . . .	—	2	17	233	202	3	41	34	115	2,162	31	571
Indiana . . . . .	1	2	12	494	1,090	—	2	10	35	869	28	827
Illinois . . . . .	1	7	181	1,457	2,920	1	17	22	97	1,977	17	715
Michigan . . . . .	—	2	325	3,264	1,446	—	25	27	166	3,263	109	1,268
Wisconsin . *	—	—	46	878	2,463	—	5	4	116	3,318	78	1,248
WEST NORTH CENTRAL . . . . .	—	4	14	356	823	—	57	58	127	3,894	25	1,099
Minnesota . . . . .	—	1	—	15	15	—	—	13	1	73	2	189
Iowa . . . . .	—	—	12	236	569	—	11	2	109	2,566	1	163
Missouri . . . . .	—	1	—	23	150	—	29	18	10	461	2	238
North Dakota . . . . .	—	1	—	52	46	—	3	—	6	60	20	257
South Dakota . . . . .	—	—	—	—	4	—	3	2	1	12	—	21
Nebraska . . . . .	—	—	—	3	18	—	4	7	—	83	—	136
Kansas . . . . .	—	1	2	27	21	—	7	16	—	639	—	95
SOUTH ATLANTIC . . . . .	1	12	30	894	1,655	7	116	148	189	4,995	37	1,584
Delaware . . . . .	—	—	—	5	17	—	—	1	4	216	—	7
Maryland . . . . .	—	—	—	1	12	—	17	25	23	502	—	8
District of Columbia . . . . .	—	—	1	3	2	—	2	4	10	37	—	2
Virginia . . . . .	—	4	1	355	52	—	19	36	13	478	2	371
West Virginia . . . . .	—	—	9	151	197	—	2	6	76	1,696	12	235
North Carolina . . . . .	—	3	—	4	28	3	23	21	NN	NN	2	187
South Carolina . . . . .	—	1	1	51	186	2	10	14	2	317	1	73
Georgia . . . . .	—	—	3	39	124	—	17	3	—	25	—	7
Florida . . . . .	1	4	15	285	1,037	2	26	38	61	1,724	20	694
EAST SOUTH CENTRAL . . . . .	—	2	21	534	941	—	65	58	136	2,968	39	1,034
Kentucky . . . . .	—	—	11	348	472	—	24	20	34	962	4	348
Tennessee . . . . .	—	—	2	143	180	—	23	22	89	1,205	12	366
Alabama . . . . .	—	2	4	4	126	—	13	10	8	353	21	155
Mississippi . . . . .	—	—	4	39	163	—	5	6	5	448	2	165
WEST SOUTH CENTRAL . . . . .	—	9	16	558	1,182	4	110	83	86	2,728	31	1,298
Arkansas . *	—	—	1	63	11	—	12	7	17	228	2	104
Louisiana . . . . .	—	2	3	65	75	2	23	23	—	50	4	90
Oklahoma . . . . .	—	1	—	40	9	—	10	6	2	293	2	157
Texas . . . . .	—	6	12	390	1,087	2	65	47	67	2,157	23	947
MOUNTAIN . . . . .	—	7	5	408	1,425	—	19	12	64	2,070	51	2,198
Montana . . . . .	—	1	—	12	12	—	4	2	12	194	18	441
Idaho . . . . .	—	—	4	193	16	—	1	3	2	105	6	26
Wyoming . . . . .	—	—	—	10	1	—	—	1	—	417	—	5
Colorado . . . . .	—	1	—	81	432	—	5	2	16	303	17	1,478
New Mexico . . . . .	—	1	1	100	92	—	3	1	33	828	6	164
Arizona . . . . .	—	4	—	11	722	—	3	1	—	140	—	16
Utah . . . . .	—	—	—	1	150	—	1	1	1	76	4	65
Nevada . . . . .	—	—	—	—	—	—	2	1	—	7	—	3
PACIFIC . . . . .	1	26	67	1,640	3,534	3	122	128	273	7,266	157	3,172
Washington . *	1	2	15	803	831	1	13	11	55	1,259	29	546
Oregon . . . . .	—	2	26	371	40	—	10	11	56	1,347	52	668
California . . . . .	—	19	25	455	2,569	2	95	99	145	3,930	76	1,938
Alaska . . . . .	—	2	—	—	11	—	4	4	5	555	—	2
Hawaii . . . . .	—	1	1	11	83	—	—	3	12	175	—	18
Guam . *	—	—	—	4	2	—	—	9	—	5	—	5
Puerto Rico . . . . .	—	—	77	1,332	387	—	4	3	27	452	1	20
Virgin Islands . . . . .	—	—	—	—	1	—	—	2	—	14	—	1

\*Delayed reports: Measles: Me. 7, Ark. delete 1, Guam 1  
Mumps: Me. 8  
Meningococcal infections: Wis. 1  
Rubella: Me. 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MAY 26, 1973 AND MAY 27, 1972 (21st WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS			
		Cumulative 1973	1973		Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
											1973	1973		
UNITED STATES .....	33	629	12,854	25	9	329	16	65	16,554	479	80	1,495		
NEW ENGLAND .....	2	23	434	—	—	5	—	1	478	18	3	79		
Maine .....	—	3	33	—	—	—	—	—	16	—	1	46		
New Hampshire .....	—	4	30	—	—	—	—	—	19	—	—	27		
Vermont .....	—	—	12	—	—	—	—	—	9	1	1	3		
Massachusetts .....	—	5	242	—	—	5	—	1	313	10	1	3		
Rhode Island .....	1	1	31	—	—	—	—	—	60	—	—	—		
Connecticut .....	1	10	86	—	—	—	—	—	61	7	—	—		
MIDDLE ATLANTIC .....	4	144	2,643	—	1	22	1	2	2,801	103	—	8		
Upstate New York .....	—	25	493	—	—	3	1	1	189	8	—	4		
New York City .....	2	65	979	—	1	8	—	—	1,773	58	—	—		
New Jersey .....	2	12	455	—	—	6	—	—	298	18	—	—		
Pennsylvania .....	—	42	716	—	—	5	—	1	541	19	—	4		
EAST NORTH CENTRAL .....	4	141	2,019	—	2	15	—	—	1,939	24	6	137		
Ohio .....	1	36	626	—	—	5	—	—	719	6	—	18		
Indiana .....	—	33	286	—	—	—	—	—	198	5	3	38		
Illinois .....	2	22	566	—	1	3	—	—	280	5	3	40		
Michigan .....	—	50	464	—	1	5	—	—	556	6	—	2		
Wisconsin * .....	1	—	77	—	—	2	—	—	186	2	—	39		
WEST NORTH CENTRAL .....	5	6	479	4	—	8	—	1	653	5	30	429		
Minnesota .....	—	2	62	—	—	3	—	—	185	1	14	147		
Iowa .....	—	—	43	—	—	—	—	—	104	—	5	102		
Missouri .....	4	1	226	4	—	3	—	1	170	4	3	37		
North Dakota .....	1	—	16	—	—	—	—	—	13	—	4	70		
South Dakota .....	—	—	31	—	—	1	—	—	65	—	2	32		
Nebraska .....	—	—	38	—	—	1	—	—	51	—	—	2		
Kansas .....	—	3	63	—	—	—	—	—	65	—	2	39		
SOUTH ATLANTIC .....	5	121	2,487	6	—	217	9	33	4,422	184	1	125		
Delaware .....	—	—	30	—	—	—	—	1	81	2	—	—		
Maryland .....	—	18	241	—	—	4	1	1	350	12	—	7		
District of Columbia * .....	—	7	124	—	—	—	—	—	356	16	—	—		
Virginia .....	—	10	339	1	—	—	2	8	451	54	1	44		
West Virginia .....	—	5	131	—	—	2	—	—	55	—	—	14		
North Carolina .....	—	15	397	1	—	3	3	10	782	28	—	—		
South Carolina .....	—	11	241	—	—	2	3	7	286	25	—	1		
Georgia .....	1	14	415	3	—	1	—	6	955	14	—	41		
Florida .....	4	41	569	1	—	205	—	—	1,106	33	—	18		
EAST SOUTH CENTRAL .....	5	55	1,134	5	—	6	4	8	1,270	27	10	280		
Kentucky * .....	1	12	288	1	—	1	—	—	130	10	2	148		
Tennessee .....	2	24	345	3	—	3	4	6	539	6	7	101		
Alabama .....	2	13	301	—	—	2	—	2	303	5	1	31		
Mississippi .....	—	6	200	1	—	—	—	—	298	6	—	—		
WEST SOUTH CENTRAL .....	5	69	1,313	10	2	10	1	17	2,194	52	17	294		
Arkansas .....	—	13	150	3	—	2	—	2	130	1	—	66		
Louisiana * .....	2	7	236	—	2	2	—	—	536	19	—	18		
Oklahoma .....	1	11	119	5	—	1	1	15	164	6	7	96		
Texas .....	2	38	808	2	—	5	—	—	1,364	26	10	114		
MOUNTAIN .....	—	11	402	—	2	4	—	—	433	19	—	15		
Montana .....	—	1	14	—	2	2	—	—	24	—	—	—		
Idaho .....	—	—	17	—	—	—	—	—	38	—	—	—		
Wyoming .....	—	1	8	—	—	—	—	—	9	—	—	—		
Colorado .....	—	—	75	—	—	—	—	—	146	3	—	—		
New Mexico .....	—	2	91	—	—	1	—	—	104	5	—	2		
Arizona * .....	—	—	152	—	—	1	—	—	—	—	—	13		
Utah .....	—	1	14	—	—	—	—	—	57	—	—	—		
Nevada .....	—	6	31	—	—	—	—	—	55	11	—	—		
PACIFIC .....	3	59	1,943	—	2	42	1	3	2,364	47	13	128		
Washington * .....	—	10	171	—	2	3	1	2	236	6	—	—		
Oregon .....	—	1	103	—	—	2	—	1	220	—	—	1		
California .....	3	38	1,505	—	—	36	—	—	1,833	29	12	120		
Alaska .....	—	—	47	—	—	—	—	—	31	8	1	7		
Hawaii .....	—	10	117	—	—	1	—	—	44	4	—	—		
Guam * .....	—	—	12	—	—	—	—	—	—	—	—	—		
Puerto Rico .....	3	13	229	—	—	2	—	—	83	26	—	17		
Virgin Islands .....	—	—	—	—	—	—	—	—	3	—	—	—		

\*Delayed reports: TB: Wis. delete 57, Ky. delete 1  
Typhoid: Ariz. delete 1

Gonorrhea: D.C. delete 1,800, La. delete 15, Guam 5  
Rabies: Wis. 2, Ariz. 4

## Morbidity and Mortality Weekly Report

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING MAY 26, 1973

Week No.

21

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	724	458	23	38	SOUTH ATLANTIC	1,287	704	39	37
Boston, Mass.	209	127	9	10	Atlanta, Ga.	158	67	3	4
Bridgeport, Conn.	56	35	2	3	Baltimore, Md.	259	147	8	5
Cambridge, Mass.	20	15	1	5	Charlotte, N. C.	63	33	5	—
Fall River, Mass.	32	20	—	—	Jacksonville, Fla.	88	45	3	—
Hartford, Conn.	76	47	2	1	Miami, Fla.	113	64	5	5
Lowell, Mass.	25	18	1	2	Norfolk, Va.	60	33	2	—
Lynn, Mass.	24	14	1	1	Richmond, Va.	76	38	1	4
New Bedford, Mass.	31	22	—	2	Savannah, Ga.	49	24	2	3
New Haven, Conn.	46	26	1	1	St. Petersburg, Fla.	96	80	—	5
Providence, R. I.	54	26	2	3	Tampa, Fla.	68	45	2	5
Somerville, Mass.	7	3	—	2	Washington, D. C.	186	93	5	7
Springfield, Mass.	50	33	2	4	Wilmington, Del.	71	35	3	—
Waterbury, Conn.	27	22	—	2	EAST SOUTH CENTRAL	639	354	25	21
Worcester, Mass.	67	50	2	2	Birmingham, Ala.	105	55	2	—
MIDDLE ATLANTIC	2,969	1,799	77	93	Chattanooga, Tenn.	47	27	3	2
Albany, N. Y.	46	31	2	—	Knoxville, Tenn.	39	24	1	—
Allentown, Pa.	17	12	1	1	Louisville, Ky.	114	65	7	6
Buffalo, N. Y.	148	83	4	6	Memphis, Tenn.	135	82	1	2
Camden, N. J.	44	24	—	—	Mobile, Ala.	56	21	4	—
Elizabeth, N. J.	38	25	1	1	Montgomery, Ala.	32	18	3	5
Erie, Pa.	42	26	1	2	Nashville, Tenn.	111	62	4	6
Jersey City, N. J.	57	31	2	3	WEST SOUTH CENTRAL	1,303	672	66	38
Newark, N. J.	80	44	4	3	Austin, Tex.	50	23	8	3
New York City, N. Y. †	1,546	935	40	39	Baton Rouge, La.	56	28	1	—
Paterson, N. J.	41	24	3	4	Corpus Christi, Tex.	48	22	1	1
Philadelphia, Pa.	307	164	3	4	Dallas, Tex.	194	104	12	2
Pittsburgh, Pa.	197	113	7	14	El Paso, Tex.	51	29	3	3
Reading, Pa.	32	21	1	2	Fort Worth, Tex.	78	42	3	—
Rochester, N. Y.	131	91	4	7	Houston, Tex.	254	126	9	9
Schenectady, N. Y.	30	19	—	—	Little Rock, Ark.	64	29	5	4
Scranton, Pa.	43	32	—	3	New Orleans, La.	165	71	12	3
Syracuse, N. Y.	76	53	2	1	Oklahoma City, Okla. *	91	50	5	2
Trenton, N. J.	37	23	1	1	San Antonio, Tex.	138	75	3	6
Utica, N. Y.	22	20	—	—	Shreveport, La.	58	32	3	3
Yonkers, N. Y.	35	28	1	2	Tulsa, Okla.	56	41	1	2
EAST NORTH CENTRAL	2,501	1,477	76	65	MOUNTAIN	545	295	35	14
Akron, Ohio	64	44	3	—	Albuquerque, N. Mex.	49	31	3	3
Canton, Ohio	36	18	3	—	Colorado Springs, Colo.	33	14	2	2
Chicago, Ill.	626	337	18	18	Denver, Colo.	133	61	17	2
Cincinnati, Ohio	184	125	4	3	Las Vegas, Nev.	42	19	2	—
Cleveland, Ohio	195	111	3	3	Ogden, Utah	20	15	—	1
Columbus, Ohio	140	74	2	2	Phoenix, Ariz.	126	80	4	2
Dayton, Ohio	103	65	5	—	Pueblo, Colo.	25	11	1	1
Detroit, Mich.	357	203	10	9	Salt Lake City, Utah	51	29	4	3
Evansville, Ind.	55	39	2	1	Tucson, Ariz.	66	35	2	—
Fort Wayne, Ind.	54	34	3	6	PACIFIC	1,589	963	63	41
Gary, Ind.	37	20	1	3	Berkeley, Calif.	33	24	—	2
Grand Rapids, Mich.	64	44	1	5	Fresno, Calif.	55	34	2	1
Indianapolis, Ind.	128	74	3	1	Glendale, Calif.	37	35	—	—
Madison, Wis.	29	11	2	2	Honolulu, Hawaii	54	26	1	2
Milwaukee, Wis.	132	91	5	2	Long Beach, Calif.	107	68	2	4
Peoria, Ill.	51	27	6	1	Los Angeles, Calif.	474	285	20	13
Rockford, Ill.	35	22	1	2	Oakland, Calif.	82	41	6	2
South Bend, Ind.	44	25	—	4	Pasadena, Calif.	24	14	1	—
Toledo, Ohio	113	81	2	1	Portland, Oreg.	139	91	10	3
Youngstown, Ohio	54	32	2	2	Sacramento, Calif.	59	37	2	—
WEST NORTH CENTRAL	810	519	35	28	San Diego, Calif.	103	58	5	1
Des Moines, Iowa	61	36	5	1	San Francisco, Calif.	149	87	3	3
Duluth, Minn.	19	16	1	4	San Jose, Calif.	48	24	2	—
Kansas City, Kans.	50	29	3	3	Seattle, Wash.	129	78	8	4
Kansas City, Mo.	160	99	7	1	Spokane, Wash.	55	36	1	5
Lincoln, Nebr.	25	15	1	—	Tacoma, Wash.	41	25	—	1
Minneapolis, Minn.	104	70	3	1	Total	12,367	7,241	439	375
Omaha, Nebr.	81	59	2	1	Expected Number	12,454	7,113	537	407
St. Louis, Mo.	205	126	8	8	Cumulative Total (includes reported corrections for previous weeks)	282,677	168,014	10,304	13,030
St. Paul, Minn.	64	43	3	2					
Wichita, Kans.	41	26	2	7					

†Delayed report for week ending May 19, 1973.

\*Estimate based on average percent of divisional total.

EPIDEMIOLOGIC NOTES AND REPORTS  
MEASLES — Virginia

During the winter semester break, a student attending Hollins College in Roanoke County, Virginia, visited her family in London, England. During her stay, her younger brother had measles. On February 10, 1973, she returned to Virginia and 11 days later developed measles with fever and bronchitis. She was admitted to the college infirmary. Twelve to 14 days after the onset of her symptoms, 3 other students became ill with measles. Investigation revealed that all 4 patients lived in the same dormitory. Two of the girls had direct exposure to the index case during the period of maximum infectivity. The fourth girl, an acquaintance, gave no history of close contact. No further cases of measles on campus have been reported.

Hollins College, a private girls' school, has an enroll-

ment of 1,100 students. Certification of natural measles infection or immunization is not required for admission. A review of health records showed that over 90% of the students had experienced measles or had been vaccinated prior to entering Hollins. This immunity level was judged sufficient to prevent transmission of measles to the remaining 80-90 susceptible students, and the infirmary staff did not administer measles vaccine to these women.

(Reported by J. C. Zillhardt, M.D., Student Health Clinician, Hollins College; Ruby Testerman, R.N., Public Health Nurse, and C. P. Pope, M.D., Director, Roanoke County Health Department; Karl Western, M.D., State Epidemiologist, Virginia Department of Health; and an EIS Officer.)

FATALITY ASSOCIATED WITH CHLORAMPHENICOL-RESISTANT  
TYPHOID FEVER — California

On June 27, 1972, a 14-year-old Mexican girl was admitted to the emergency room of a Los Angeles hospital with a 7-day history of fever and the sudden onset of tremors and collapse. On admission, she was moribund, with fixed and dilated pupils and no pulse or spontaneous respiration. Vigorous attempts at resuscitation were unsuccessful, and she was pronounced dead approximately 1 hour after arrival at the hospital. Urine, sputum, and stool specimens were obtained immediately prior to the patient's death. The stool specimen yielded *Salmonella typhi*, phage type Vi(A), resistant to chloramphenicol, sulfathiazole, streptomycin, and tetracycline. *Escherichia coli* (> 100,000/cc) was recovered from urine, and 2 *E. coli* strains were recovered from sputum. Toxicologic screening studies were negative. Postmortem specimens from the ileum and spleen were positive for *S. typhi*, but no additional pathologic findings were detected; typhoid

fever was listed as the cause of death.

Epidemiologic investigation revealed that the patient had arrived in the United States from Puebla in central Mexico in apparently good health on approximately June 13.

(Reported by Gary Overturf, M.D., Communicable Disease Fellow, and Allen W. Mathies, M.D., Chief, Communicable Disease Service, Los Angeles County-University of Southern California Medical Center; Ichiro Kamei, M.D., Chief, Division of Acute Communicable Disease Control, and Ralph R. Sachs, M.D., Deputy Director, Los Angeles County Community Health Services; and an EIS Officer.)

Editorial Note

This is the second death among 120 cases of typhoid fever reported from Los Angeles in the past 10 years and the first fatality in the United States reported to CDC associated with the epidemic strain of *S. typhi* from Mexico.

CHLORAMPHENICOL-AMPICILLIN RESISTANT *SALMONELLA TYPHI* — California

On February 22, 1973, a 47-year-old woman was hospitalized in San Francisco with a 2-week history of fever and shaking chills. Blood, stool, and urine specimens taken on admission were positive for a strain of *Salmonella typhi* resistant to chloramphenicol, streptomycin, tetracycline, and sulfonamides, but sensitive to ampicillin.

Epidemiologic investigation revealed that the patient had been traveling in Mexico with her family 1 month prior to her hospitalization and had had diarrhea on the trip.

The patient was treated with intravenous ampicillin with a satisfactory clinical response despite complicating gastrointestinal hemorrhage. After 10 days of therapy, a stool specimen was positive for a strain of *S. typhi* resistant to ampicillin, carbenicillin, and kanamycin in addition to the other 4 antimicrobials.

(Reported by Stephen N. Cohen, M.D., Division of Clinical Pathology and Laboratory Medicine, School of Medicine,

University of California, San Francisco Medical Center.)

Editorial Note

This is the 52nd case of typhoid fever in the United States reported to CDC due to a strain related to the recent epidemic in Mexico (MMWR, Vol. 21, Nos. 21, 24, 34, and 38, and Vol. 22, No. 18). In Mexico, most of the epidemic strains have had a characteristic pattern of resistance to 4 antimicrobials including chloramphenicol, and a small proportion have also been resistant to ampicillin. The initial isolate from this patient was sensitive to ampicillin, as have been all other isolates from typhoid patients in the United States. There are 2 possible explanations for the finding of ampicillin resistance in the strain recovered after ampicillin treatment. The drug may have selected out an ampicillin resistant strain initially undetected in the predominantly ampicillin-sensitive population. More probably, the ampicillin-sensitive strain acquired an episome conferring resistance to

**SALMONELLA TYPHI – Continued**

ampicillin, carbenicillin, and kanamycin from another enteric bacterium.

Co-trimoxazole, a combination of trimethoprim and sulfamethoxazole, available in the United States only as an investigational new drug, has been demonstrated to be efficacious in the treatment of illness due to multiply sensitive *S. typhi* (1). Although published and confirmed data on the efficacy of this drug combination in the treatment of typhoid fever due to organisms resistant to both chloramphenicol and ampicillin are not yet available, it should be considered in the treatment of such cases.

**Reference**

1. Sardesai HV, Karandikar RS, Harshe RG: Comparative trial of co-trimoxazole and chloramphenicol in typhoid fever. *Brit Med J* 1:82-83, 1973

**Erratum, Vol. 22, No. 20, p. 176**

In the article, "Follow-up on Technical Problems with FTA-ABS Test for Syphilis – Stability of Lyophilized Sorbent," correct the last sentence in the first paragraph to read: Studies by 2 commercial laboratories on the stability of liquid sorbent have shown that it has measurable loss of activity when stored for periods of 24-36 months, thus confirming earlier studies (1).

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Director, Center for Disease Control  
Director, Epidemiology Program, CDC  
Editor, MMWR

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Michael B. Gregg, M.D.

The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

CENTER FOR DISEASE CONTROL

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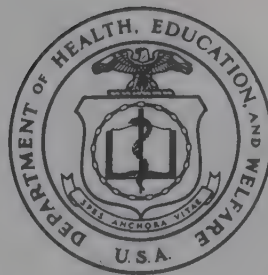
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# Morbidity and Mortality



U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

DATE OF RELEASE: JUNE 15, 1973 - ATLANTA, GEORGIA 30333

## EPIDEMIOLOGIC NOTES AND REPORTS INTERSTATE OUTBREAK OF NON-ABATTOIR ASSOCIATED BRUCELLOSIS - Colorado, Texas

Between February and March 1973, 2 outbreaks of brucellosis associated with exposure to Mexican cheese were reported in Colorado and Texas; each is summarized below:

**Outbreak 1:** On February 19, 1973, a 24-year-old woman was hospitalized in Denver, Colorado, with a 3-week history of fever, chills, night sweats, and generalized abdominal and low back pain. One week prior to admission, she had had bitemporal headache, dark urine, and watery diarrhea. On February 16, she had been examined in the emergency room of the hospital; her hematocrit was 32, and her white blood cell count (WBC) was 4,900 with atypical lymphocytes.

On admission, she had tachycardia and a rectal temperature of 40.9°C; other physical findings included a soft systolic murmur at the cardiac base, mild lower quadrant abdominal

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tenderness, hepatosplenomegaly, and bilateral costovertebral angle tenderness. Her hematocrit was 28 and hemoglobin 8.4 gm%, and she had evidence of disseminated intravascular coagulation without bleeding. Liver function tests and electrolytes were normal; her WBC was 2,700.

A serum specimen taken on February 20 showed a Brucella agglutination titer of 1:3,200, and a blood culture was positive for *Brucella melitensis*. Following treatment with

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	23rd WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 23 WEEKS		
	June 9, 1973	June 10, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	52	52	48	886	841	544
Brucellosis	3	4	4	58	62	69
Chickenpox	4,565	4,145	---	129,419	98,205	---
Diphtheria	2	2	2	88	49	79
Encephalitis, primary:						
Arthropod-borne and unspecified	28	17	21	470	360	437
Encephalitis, post-infectious	13	10	9	133	126	153
Hepatitis, serum (Hepatitis B)	185	205	143	3,444	4,220	3,090
Hepatitis, infectious (Hepatitis A)	1,017	1,115	1,076	22,776	25,242	24,881
Malaria	7	7	50	104	560	1,161
Measles (rubeola)	811	1,216	1,216	20,451	22,681	22,681
Meningococcal infections, total	25	21	33	769	744	1,429
Civilian	25	18	33	751	711	1,283
Military	---	3	3	18	33	146
Mumps	1,809	1,660	2,530	46,179	48,196	62,703
Rubella (German measles)	754	651	1,535	22,957	17,849	36,112
Tetanus	1	---	2	36	39	46
Tuberculosis, new active	584	595	---	14,147	14,577	---
Tularemia	7	2	2	33	45	45
Typhoid fever	12	5	5	347	128	116
Typhus, tick-borne (Rky. Mt. spotted fever)	45	15	16	136	89	75
Venereal Diseases:						
Gonorrhea	15,892	13,957	---	339,824	301,263	---
Syphilis, primary and secondary	452	536	---	11,700	10,599	---
Rabies in animals	82	101	68	1,642	2,018	1,726

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	2
Botulism: Wash. - 2	11	Paralytic:	2
Congenital rubella syndrome: Minn. - 1	12	Psittacosis: Md. - 1	8
Leprosy: Colo. - 1, Hawaii - 1	49	Rabies in man:	---
Leptospirosis:	13	Trichinosis:	38
Plague:	---	Typhus, murine: Tex. - 1	12

**BRUCELLOSIS — Continued**

ampicillin, kanamycin, and tetracycline, she has remained asymptomatic.

On March 13, the 24-year-old sister of this patient was admitted to the same hospital and gave a 2-week history of head cold and fever. The week prior to admission, she had experienced a dry, nonproductive cough, bitemporal headache, nausea, vomiting, and mild generalized arthralgia; she had also had occasional night sweats, fever, and chills.

On admission, her temperature was 38.6°C orally, and her pulse rate was 120 per minute. She had inspiratory rales over the left lower lobe and a soft systolic murmur at the cardiac base; otherwise, the physical examination was normal. Chest X-ray revealed a left lower lobe infiltrate. Her hematocrit was 28 and hemoglobin 9.7 gm% with normal clotting tests. A serum specimen obtained on March 15 showed a *Brucella* agglutination titer of 1:320. She was treated with kanamycin and is presently asymptomatic.

The household contacts of these 2 patients were subsequently examined; the husband, daughter, and brother of the first patient were asymptomatic, and a serum specimen from the brother was negative for *Brucella* antibodies. The husband and daughter of the second patient were also asymptomatic, but her mother-in-law reported having fever and chills in late February and had been treated with a 1-week course of tetracycline by her private physician. Serum specimens from the husband and daughter were negative; the mother-in-law's serum had a *Brucella* agglutination titer of 1:320.

Epidemiologic investigation revealed that the mother-in-law of the second patient had purchased goat cheese at a market in Juarez, Mexico, and that this cheese had subsequently been eaten by several members of the 2 families. Both sisters gave a history of eating the cheese, but the mother-in-law denied eating it.

**Outbreak 2:** In March 1973, 3 members of a family living in

El Paso, Texas, became ill with brucellosis; *B. melitensis* was isolated from the blood of 1 child, and all symptomatic individuals had elevated *Brucella* agglutinin titers. Seven other family members were asymptomatic and had negative titers. Cheese purchased at a Juarez, Mexico, market had been eaten by all members of the family in the 3 weeks prior to onset of symptoms in the 3 ill persons.

Three additional cases of brucellosis were reported from El Paso between January and April 1973; 1 was in a person who had eaten cheese purchased in Mexico. No cases of brucellosis were reported from El Paso in 1972.

(Reported by Linda Brian, Public Health Nurse, and J. Kurowski, M.D., Chief, Disease Control, Denver Health and Hospitals; Mark Eckman, M.D., Infectious Disease Fellow, Colorado General Hospital; Thomas M. Vernon, M.D., State Epidemiologist, Colorado State Department of Public Health; Bernard F. Rosenblum, M.D., Director, and Martha Apodaca, R.N., Public Health Nurse, El Paso City-County Health Unit; M. S. Dickerson, M.D., State Epidemiologist, Texas State Department of Health; and an EIS Officer.)

**Editorial Note**

Brucellosis in the United States today occurs predominantly in workers in the livestock and meat processing industries; in recent years, about 15% of reported cases have been associated with the ingestion of presumably unpasteurized dairy products (1). Of the 190 reported cases in 1971, 19 were associated with Mexican cheese or dairy products, and 2 persons were infected after ingestion of Italian dairy products. The persons with brucellosis in the 2 outbreaks reported here have in common a history of exposure to cheese purchased in Juarez, Mexico, early in 1973. An inquiry regarding exposure to such food is definitely indicated in investigating cases of brucellosis.

**Reference**

1. Center for Disease Control: Brucellosis 1971 Annual Summary, October 1972

**TRICHINOSIS — Nebraska**

Between January 14 and 29, 1973, 15 of 25 members of 4 families in West Point, Nebraska, became ill with fever (93%), diarrhea (73%), muscle aches (67%), periorbital edema (53%), and headache (47%) (Table 1). Three of the ill persons were hospitalized: 1 with pneumonia and severe muscle aches, 1 with nephritis, and 1 with evidence of myocarditis and

central nervous system symptoms. Using the trichinosis bentonite flocculation test, titers were observed in 12 of the 15 ill individuals. Of 11 persons on whom data were available, 10 had white blood cell counts  $\geq 10,000$ , and 11 had eosinophilia. All ill persons were diagnosed as having trichinosis (Continued on page 199)

Table 1  
Signs and Symptoms in 15 Persons with Trichinosis  
West Point, Nebraska — January-February 1973

Sign or Symptom	Patients with Sign or Symptom		Sign or Symptom	Patients with Sign or Symptom	
	Number	Percent		Number	Percent
Fever	14	93	Chills and Sweating	3	20
Diarrhea	11	73	Fainting and Vertigo	2	13
Muscle Aches	10	67	Hair Loss (late)	2	13
Weakness	10	67	Cramps	1	7
Periorbital Edema	8	53	Nausea	1	7
Headache	7	47	Myocarditis	1	7
Weight Loss	5	34	Pneumonia	1	7
Facial Edema	4	27	Nephritis	1	7

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JUNE 9, 1973 AND JUNE 10, 1972 (23rd WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES .....	55	3	4,565	2	88	28	17	13	185	1,017	1,115
NEW ENGLAND .....	3	-	770	-	3	-	2	-	3	60	75
Maine *	-	-	8	-	-	-	-	-	-	-	12
New Hampshire *	-	-	24	-	-	-	-	-	-	7	2
Vermont .....	-	-	15	-	-	-	-	-	-	2	8
Massachusetts .....	1	-	372	-	1	-	1	-	-	32	42
Rhode Island .....	2	-	99	-	2	-	-	-	1	6	3
Connecticut .....	-	-	252	-	-	-	1	-	2	13	8
MIDDLE ATLANTIC .....	4	-	412	-	-	3	6	-	25	123	162
Upstate New York .....	1	-	5	-	-	1	-	-	3	48	50
New York City .....	-	-	210	-	-	-	-	-	4	16	32
New Jersey .....	3	-	NN	-	-	2	5	-	13	32	53
Pennsylvania .....	-	-	197	-	-	-	1	-	5	27	27
EAST NORTH CENTRAL .....	8	-	1,916	-	-	18	5	7	21	145	174
Ohio .....	3	-	439	-	-	7	2	-	4	31	43
Indiana .....	-	-	156	-	-	1	-	-	-	11	14
Illinois .....	3	-	-	-	-	4	1	7	10	28	48
Michigan .....	2	-	651	-	-	6	2	-	6	72	61
Wisconsin .....	-	-	670	-	-	-	-	-	1	3	8
WEST NORTH CENTRAL .....	1	1	160	-	7	1	-	2	5	46	52
Minnesota *	-	-	3	-	-	-	-	2	1	6	4
Iowa .....	-	1	128	-	-	1	-	-	-	2	10
Missouri .....	1	-	12	-	-	-	-	-	3	16	16
North Dakota .....	-	-	7	-	-	-	-	-	1	-	3
South Dakota .....	-	-	-	-	7	-	-	-	-	1	2
Nebraska .....	-	-	10	-	-	-	-	-	-	1	3
Kansas .....	-	-	-	-	-	-	-	-	-	20	14
SOUTH ATLANTIC .....	5	1	384	-	-	2	1	-	25	213	160
Delaware .....	-	-	19	-	-	-	-	-	-	-	7
Maryland .....	-	-	37	-	-	-	-	-	5	72	20
District of Columbia .....	-	-	5	-	-	-	-	-	-	2	-
Virginia .....	-	-	31	-	-	-	-	-	1	16	29
West Virginia .....	-	-	242	-	-	-	-	-	-	7	13
North Carolina .....	2	-	NN	-	-	2	-	-	4	16	25
South Carolina .....	1	-	50	-	-	-	-	-	-	9	9
Georgia .....	-	1	-	-	-	-	-	-	-	4	30
Florida .....	2	-	-	-	-	-	1	-	15	87	27
EAST SOUTH CENTRAL .....	3	1	86	-	-	-	-	2	24	69	64
Kentucky .....	-	-	64	-	-	-	-	-	1	24	23
Tennessee .....	1	1	NN	-	-	-	-	1	4	19	28
Alabama .....	2	-	19	-	-	-	-	1	14	22	6
Mississippi .....	-	-	3	-	-	-	-	-	5	4	7
WEST SOUTH CENTRAL .....	5	-	307	1	7	2	-	-	16	144	138
Arkansas *	-	-	16	-	-	-	-	-	-	7	11
Louisiana .....	4	-	NN	-	-	-	-	-	1	18	44
Oklahoma .....	1	-	28	-	-	2	-	-	2	16	28
Texas .....	-	-	263	1	7	-	-	-	13	103	85
MOUNTAIN .....	-	-	108	-	2	-	-	-	3	40	67
Montana .....	-	-	39	-	-	-	-	-	1	4	1
Idaho .....	-	-	-	-	-	-	-	-	2	4	2
Wyoming .....	-	-	-	-	-	-	-	-	-	-	-
Colorado .....	-	-	46	-	-	-	-	-	-	20	12
New Mexico .....	-	-	17	-	2	-	-	-	-	11	10
Arizona *	-	-	-	-	-	-	-	-	-	1	32
Utah .....	-	-	6	-	-	-	-	-	-	-	10
Nevada .....	-	-	-	-	-	-	-	-	-	-	-
PACIFIC .....	26	-	422	1	69	2	3	2	63	177	223
Washington .....	2	-	324	1	64	-	-	-	4	20	28
Oregon .....	-	-	-	-	3	-	1	-	3	34	40
California .....	24	-	-	-	2	2	2	2	56	117	154
Alaska .....	-	-	7	-	-	-	-	-	-	2	1
Hawaii .....	-	-	91	-	-	-	-	-	-	4	-
Guam *	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	-	33	-	-	-	-	-	-	36	13
Virgin Islands .....	-	-	48	-	-	-	-	-	-	-	1

\*Delayed reports: Aseptic meningitis: Guam 2  
Chickenpox: Me. 47, Guam 6

Hepatitis B: Minn. 5, Ark. 2, Ariz. 1  
Hepatitis A: Me. 4, N.H. 1, Minn. delete 5,  
Ark. 5, Ariz. 7, Guam 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JUNE 9, 1973 AND JUNE 10, 1972 (23rd WEEK) — Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	7	104	811	20,451	22,681	25	769	744	1,809	46,179	754	22,957
NEW ENGLAND .....	—	9	127	6,896	2,396	—	34	32	70	2,121	109	3,321
Maine *	—	—	1	46	224	—	—	3	1	200	—	66
New Hampshire .....	—	—	4	820	210	—	6	2	—	162	9	347
Vermont .....	—	2	1	105	98	—	2	—	1	222	1	41
Massachusetts .....	—	3	80	3,720	420	—	11	16	24	685	61	1,872
Rhode Island .....	—	—	14	534	473	—	1	9	23	243	5	202
Connecticut .....	—	4	27	1,671	971	—	14	2	21	609	33	793
MIDDLE ATLANTIC .....	2	16	156	1,765	804	2	109	91	284	5,878	160	3,655
Upstate New York .....	2	10	74	521	108	1	40	22	NN	NN	31	338
New York City .....	—	1	23	760	186	—	20	27	181	3,505	28	361
New Jersey .....	—	1	19	249	453	—	25	19	72	1,288	94	2,699
Pennsylvania .....	—	4	40	235	47	1	24	23	31	1,085	7	257
EAST NORTH CENTRAL .....	2	16	402	6,970	9,215	3	95	100	562	12,485	197	5,058
Ohio .....	—	2	2	237	215	1	42	35	156	2,383	28	604
Indiana .....	1	3	10	509	1,124	—	2	10	87	991	21	867
Illinois .....	—	8	84	1,620	3,419	2	20	24	71	2,127	31	777
Michigan .....	1	3	258	3,652	1,607	—	26	27	154	3,472	89	1,476
Wisconsin .....	—	—	48	952	2,850	—	5	4	94	3,512	28	1,334
WEST NORTH CENTRAL .....	—	4	7	403	894	6	64	60	57	4,095	18	1,141
Minnesota .....	—	1	—	15	16	1	2	13	2	75	3	200
Iowa .....	—	—	7	259	634	4	15	2	42	2,700	9	174
Missouri .....	—	1	—	47	153	1	30	18	7	508	5	244
North Dakota .....	—	1	—	52	48	—	3	—	1	61	—	269
South Dakota .....	—	—	—	—	4	—	3	2	—	13	—	21
Nebraska .....	—	—	—	3	18	—	4	9	4	88	1	138
Kansas .....	—	1	—	27	21	—	7	16	1	650	—	95
SOUTH ATLANTIC .....	—	12	16	959	1,850	4	128	164	248	5,401	61	1,672
Delaware .....	—	—	—	5	35	—	—	1	7	228	—	8
Maryland .....	—	—	—	2	13	—	19	28	12	527	—	9
District of Columbia .....	—	—	—	3	2	1	3	7	—	37	—	2
Virginia .....	—	4	2	385	55	—	21	38	32	543	—	37
West Virginia .....	—	—	8	171	210	—	2	6	96	1,866	7	250
North Carolina .....	—	3	—	4	28	2	27	23	NN	NN	3	192
South Carolina .....	—	1	—	51	206	—	10	14	8	327	1	74
Georgia .....	—	—	—	40	135	—	17	3	—	25	—	7
Florida .....	—	4	6	298	1,166	1	29	44	93	1,848	50	753
EAST SOUTH CENTRAL .....	—	2	5	548	962	6	71	59	155	3,261	19	1,083
Kentucky .....	—	—	—	350	480	2	26	20	22	1,023	5	363
Tennessee .....	—	—	2	152	183	4	27	22	121	1,425	7	392
Alabama .....	—	2	—	4	127	—	13	11	12	365	7	162
Mississippi .....	—	—	3	42	172	—	5	6	—	448	—	166
WEST SOUTH CENTRAL .....	—	9	13	603	1,256	2	121	91	76	2,940	18	1,336
Arkansas .....	—	—	4	67	12	—	12	8	6	297	2	107
Louisiana .....	—	2	1	81	79	—	25	27	—	50	1	94
Oklahoma .....	—	1	—	48	9	—	11	6	9	332	—	160
Texas .....	—	6	8	407	1,156	2	73	50	61	2,261	15	975
MOUNTAIN .....	—	7	11	448	1,569	1	20	13	51	2,166	55	2,274
Montana .....	—	1	—	12	12	—	4	2	4	199	40	483
Idaho .....	—	—	3	219	17	—	1	3	4	109	1	27
Wyoming .....	—	—	—	10	45	—	—	1	—	417	—	5
Colorado .....	—	1	8	90	470	—	5	2	23	341	12	1,507
New Mexico .....	—	1	—	101	98	—	3	1	15	859	2	167
Arizona *	—	4	—	15	775	—	3	1	—	140	—	17
Utah .....	—	—	—	1	152	1	2	2	5	94	—	65
Nevada .....	—	—	—	—	—	—	2	1	—	7	—	3
PACIFIC .....	3	29	74	1,859	3,735	1	127	134	306	7,832	117	3,417
Washington .....	—	2	29	853	883	—	15	11	49	1,345	25	608
Oregon .....	—	2	9	395	44	—	10	11	49	1,452	28	706
California .....	3	22	30	532	2,709	1	98	104	190	4,249	63	2,073
Alaska .....	—	2	5	65	11	—	4	5	10	580	—	9
Hawaii .....	—	1	1	14	88	—	—	3	8	206	1	21
Guam *	—	—	—	4	2	—	—	11	—	6	—	6
Puerto Rico .....	—	—	74	1,453	451	—	4	4	11	491	1	21
Virgin Islands .....	—	—	—	—	1	—	—	2	—	15	1	2

\*Delayed reports: Measles: Me. 10

Mumps: Me. 33

Rubella: Me. 4, Ariz. 1, Guam 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JUNE 9, 1973 AND JUNE 10, 1972 (23rd WEEK) - Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES . . . . .	36	584	14,147	33	12	347	45	136	15,892	452	82	1,642
NEW ENGLAND . . . . .	2	32	507	—	—	5	—	1	392	18	3	83
Maine . . . . .	—	3	38	—	—	—	—	—	27	—	3	49
New Hampshire . . . . .	—	—	31	—	—	—	—	—	17	—	—	27
Vermont . . . . .	—	3	15	—	—	—	—	—	3	1	—	3
Massachusetts . . . . .	—	23	278	—	—	5	—	1	132	8	—	4
Rhode Island *. . . . .	1	3	39	—	—	—	—	—	62	—	—	—
Connecticut . . . . .	1	—	106	—	—	—	—	—	151	9	—	—
MIDDLE ATLANTIC . . . . .	5	102	2,926	—	5	28	5	8	2,309	107	1	9
Upstate New York . . . . .	—	8	511	—	1	4	3	5	484	8	—	4
New York City . . . . .	3	43	1,108	—	1	10	1	1	1,015	74	—	—
New Jersey . . . . .	2	26	516	—	—	6	1	1	302	13	—	—
Pennsylvania . . . . .	—	25	791	—	3	8	—	1	508	12	1	5
EAST NORTH CENTRAL . . . . .	4	99	2,181	—	1	17	—	1	1,932	44	7	149
Ohio *. . . . .	1	35	670	—	1	5	—	1	844	7	—	20
Indiana . . . . .	—	5	306	—	—	—	—	—	259	12	2	42
Illinois . . . . .	2	35	626	—	—	4	—	—	268	9	1	42
Michigan . . . . .	—	24	502	—	—	6	—	—	413	16	1	3
Wisconsin . . . . .	1	—	77	—	—	2	—	—	148	—	3	42
WEST NORTH CENTRAL . . . . .	5	11	514	4	—	8	1	3	806	4	27	472
Minnesota . . . . .	—	3	67	—	—	3	—	—	204	3	15	167
Iowa . . . . .	—	2	45	—	—	—	1	1	77	—	4	113
Missouri . . . . .	4	4	241	4	—	3	—	2	250	1	—	38
North Dakota . . . . .	1	—	17	—	—	—	—	—	12	—	5	77
South Dakota . . . . .	—	—	36	—	—	1	—	—	31	—	—	32
Nebraska . . . . .	—	—	39	—	—	1	—	—	55	—	—	2
Kansas . . . . .	—	2	69	—	—	—	—	—	177	—	3	43
SOUTH ATLANTIC . . . . .	5	147	2,740	6	3	220	24	71	4,637	147	5	135
Delaware . . . . .	—	2	32	—	—	—	2	3	26	2	1	1
Maryland . . . . .	—	10	269	—	—	4	—	1	336	4	—	7
District of Columbia . . . . .	—	9	134	—	—	—	—	—	340	8	—	—
Virginia . . . . .	—	20	373	1	—	—	3	18	479	44	—	44
West Virginia . . . . .	—	2	138	—	—	2	—	—	55	—	—	15
North Carolina . . . . .	—	16	428	1	—	3	15	31	755	16	—	1
South Carolina . . . . .	—	7	256	—	1	3	2	10	687	20	—	1
Georgia . . . . .	1	37	470	3	—	1	2	8	924	32	2	44
Florida . . . . .	4	44	640	1	2	207	—	—	1,035	21	2	22
EAST SOUTH CENTRAL . . . . .	6	53	1,236	5	—	7	8	18	1,328	24	13	300
Kentucky *. . . . .	1	10	306	1	—	1	—	—	136	2	8	161
Tennessee . . . . .	3	21	383	3	—	4	4	12	485	8	3	106
Alabama . . . . .	2	13	329	—	—	2	1	3	543	10	2	33
Mississippi . . . . .	—	9	218	1	—	—	3	3	164	4	—	—
WEST SOUTH CENTRAL . . . . .	6	24	1,401	17	1	12	6	30	1,955	42	20	334
Arkansas *. . . . .	—	11	165	5	—	2	—	3	278	4	6	78
Louisiana *. . . . .	2	8	249	—	—	3	—	—	529	19	—	20
Oklahoma . . . . .	2	5	129	10	1	2	6	27	247	2	8	111
Texas . . . . .	2	—	858	2	—	5	—	—	901	17	6	125
MOUNTAIN . . . . .	—	17	456	—	—	5	—	—	438	4	—	17
Montana . . . . .	—	1	15	—	—	2	—	—	44	—	—	—
Idaho . . . . .	—	—	22	—	—	—	—	—	30	—	—	—
Wyoming . . . . .	—	---	8	—	---	—	---	—	---	---	---	—
Colorado . . . . .	—	5	86	—	—	—	—	—	160	1	—	—
New Mexico . . . . .	—	7	102	—	—	1	—	—	28	—	—	2
Arizona *. . . . .	—	2	174	—	—	2	—	—	126	1	—	15
Utah . . . . .	—	1	17	—	—	—	—	—	25	—	—	—
Nevada . . . . .	—	1	32	—	—	—	—	—	25	2	—	—
PACIFIC . . . . .	3	99	2,186	1	2	45	1	4	2,095	62	6	143
Washington *. . . . .	—	16	190	—	—	3	—	2	189	3	—	—
Oregon . . . . .	—	6	116	—	—	2	1	2	131	—	—	1
California . . . . .	3	72	1,701	1	2	39	—	—	1,622	54	6	135
Alaska . . . . .	—	—	54	—	—	—	—	—	91	5	—	7
Hawaii . . . . .	—	5	125	—	—	1	—	—	62	—	—	—
Guam *. . . . .	—	—	16	—	—	—	—	—	—	—	—	—
Puerto Rico . . . . .	3	4	237	—	—	2	—	—	92	15	3	21
Virgin Islands . . . . .	—	—	—	—	—	—	—	—	7	—	—	—

\*Delayed reports: TB: Ohio delete 6, Ky. delete 1, Guam 1  
Typhoid: Ohio delete 1  
Gonorrhea: La. delete 1, Ariz. 172, Guam 4

Syphilis: R.I. 1, Ariz. 4, Wash. delete 5  
Rabies: Ark. 1

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING JUNE 9, 1973

Week No.  
23

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
					SOUTH ATLANTIC	1245	706	36	45
NEW ENGLAND	668	413	30	38	Atlanta, Ga.	119	55	10	2
Boston, Mass.	202	114	8	9	Baltimore, Md.	272	162	6	2
Bridgeport, Conn.	43	29	-	3	Charlotte, N. C.	63	36	4	-
Cambridge, Mass.	25	16	2	4	Jacksonville, Fla.	59	34	4	-
Fall River, Mass.	29	19	1	1	Miami, Fla.	108	65	1	2
Hartford, Conn.	54	34	3	-	Norfolk, Va.	76	29	3	7
Lowell, Mass.	26	16	-	1	Richmond, Va.	104	64	-	7
Lynn, Mass.	11	6	-	-	Savannah, Ga.	50	28	3	4
New Bedford, Mass.	27	20	1	-	St. Petersburg, Fla.	89	78	1	7
New Haven, Conn.	51	28	7	1	Tampa, Fla.	77	46	-	8
Providence, R. I.	62	37	7	4	Washington, D. C.	179	84	4	4
Somerville, Mass.	10	8	-	-	Wilmington, Del.	49	25	-	2
Springfield, Mass.	38	24	-	6					
Waterbury, Conn.	24	13	-	1	EAST SOUTH CENTRAL	778	434	24	31
Worcester, Mass.	66	49	1	8	Birmingham, Ala.	138	83	2	1
					Chattanooga, Tenn.	58	27	4	2
MIDDLE ATLANTIC	3001	1794	85	113	Knoxville, Tenn.	40	28	-	-
Albany, N. Y.	59	42	2	1	Louisville, Ky.	147	97	6	12
Allentown, Pa.	37	23	2	6	Memphis, Tenn.	181	90	5	2
Buffalo, N. Y.	165	95	2	13	Mobile, Ala.	51	27	2	1
Camden, N. J.	43	21	3	3	Montgomery, Ala.	43	24	3	5
Elizabeth, N. J.	25	15	-	2	Nashville, Tenn.	120	68	2	8
Erie, Pa.	41	28	2	4					
Jersey City, N. J.	63	37	5	3	WEST SOUTH CENTRAL	1235	637	58	28
Newark, N. J.	81	37	6	4	Austin, Tex.	38	19	2	1
New York City, N. Y. †	1437	872	24	46	Baton Rouge, La.	44	25	1	2
Paterson, N. J.	44	22	3	4	Corpus Christi, Tex.	38	19	5	-
Philadelphia, Pa.	399	222	11	3	Dallas, Tex.	169	96	1	-
Pittsburgh, Pa.	188	108	6	7	El Paso, Tex.	61	27	3	-
Reading, Pa.	34	19	-	4	Fort Worth, Tex.	81	39	5	1
Rochester, N. Y.	136	99	7	10	Houston, Tex.	251	114	8	8
Schenectady, N. Y.	24	17	1	-	Little Rock, Ark.	52	21	3	2
Scranton, Pa.	38	27	-	1	New Orleans, La.	134	66	13	1
Syracuse, N. Y.	82	44	4	-	Oklahoma City, Okla. *	86	48	4	1
Trenton, N. J.	39	25	3	1	San Antonio, Tex.	145	80	8	2
Utica, N. Y.	25	20	1	1	Shreveport, La.	49	25	1	4
Yonkers, N. Y.	41	21	3	-	Tulsa, Okla.	87	58	4	6
EAST NORTH CENTRAL	2554	1494	115	70	MOUNTAIN	513	271	23	18
Akron, Ohio	73	46	4	-	Albuquerque, N. Mex.	58	27	1	8
Canton, Ohio	46	30	3	1	Colorado Springs, Colo.	24	9	1	1
Chicago, Ill.	673	368	36	17	Denver, Colo.	123	66	5	7
Cincinnati, Ohio	187	112	5	9	Las Vegas, Nev.	47	22	4	1
Cleveland, Ohio	200	102	16	4	Ogden, Utah	11	7	-	-
Columbus, Ohio	135	81	6	7	Phoenix, Ariz.	102	53	2	-
Dayton, Ohio	114	69	4	2	Pueblo, Colo.	23	14	2	-
Detroit, Mich.	338	181	13	7	Salt Lake City, Utah	60	34	5	-
Evansville, Ind.	48	38	-	1	Tucson, Ariz.	65	39	3	1
Fort Wayne, Ind.	53	30	5	1					
Gary, Ind.	36	18	4	2	PACIFIC	1655	1027	43	42
Grand Rapids, Mich.	65	50	-	3	Berkeley, Calif.	11	6	-	-
Indianapolis, Ind.	115	71	4	-	Fresno, Calif.	57	24	5	1
Madison, Wis.	44	27	3	5	Glendale, Calif.	42	33	2	2
Milwaukee, Wis.	128	83	1	3	Honolulu, Hawaii	60	34	2	2
Peoria, Ill.	27	22	1	1	Long Beach, Calif.	114	77	2	3
Rockford, Ill.	38	14	2	3	Los Angeles, Calif.	527	338	10	13
South Bend, Ind.	44	26	1	2	Oakland, Calif.	89	48	3	2
Toledo, Ohio	124	76	5	-	Pasadena, Calif.	31	15	1	1
Youngstown, Ohio	66	50	2	2	Portland, Oreg.	131	85	2	2
					Sacramento, Calif.	68	41	1	2
WEST NORTH CENTRAL	793	523	25	30	San Diego, Calif.	124	71	3	-
Des Moines, Iowa	53	37	1	-	San Francisco, Calif.	138	77	3	4
Duluth, Minn.	30	20	1	5	San Jose, Calif.	60	40	3	3
Kansas City, Kans.	27	15	-	-	Seattle, Wash.	120	85	1	1
Kansas City, Mo.	131	85	6	2	Spokane, Wash.	48	32	1	2
Lincoln, Nebr.	29	21	-	-	Tacoma, Wash.	35	21	4	4
Minneapolis, Minn.	107	61	6	3					
Omaha, Nebr.	60	35	4	-	Total	12,442	7,299	439	415
St. Louis, Mo.	208	141	5	11	Expected Number	12,374	7,047	541	394
St. Paul, Minn.	86	70	-	2	Cumulative Total (includes reported corrections for previous weeks)	306,644	182,049	11,182	13,785
Wichita, Kans.	62	38	2	7					

†Delayed report for week ending June 2, 1973

\*Estimate based on average percent of divisional total

## TRICHINOSIS — Continued

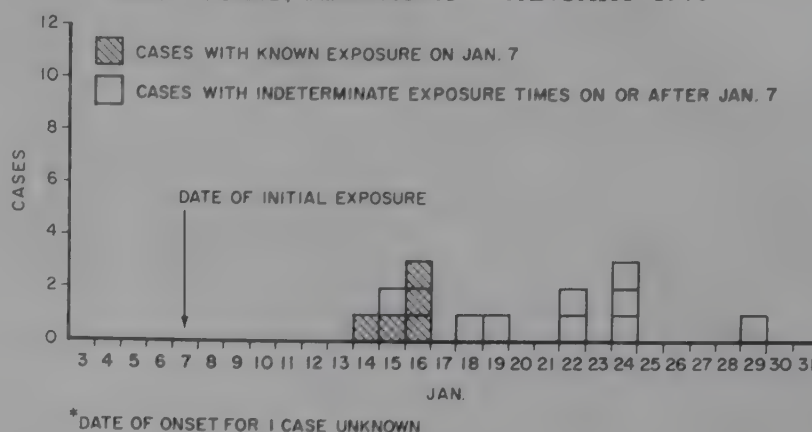
and were treated with thiabendazole; some also received steroids. There were no deaths. A survey of other household members of the 4 families identified 3 children with trichinosis bentonite flocculation titers but no signs or symptoms of illness.

Epidemiologic investigation revealed that on December 26, 1972, Family 1 had butchered 2 brood sows and 1 beef animal and 2 days later had made sausage. The ingredients were equal portions of ground beef and pork, salt, pepper, monosodium glutamate, and salt peter. The mixture was packed in natural casing, was not smoked, and hung dry until January 6, 1973, when it was divided between Families 1 and 2.

On January 7, Family 2 sponsored a card party, invited 2 other couples from Families 3 and 4, and served the sausage uncooked. Five members of these 3 families subsequently became ill with trichinosis (Figure 1). In addition, all members of Family 1 and children of Family 2 ate sausage in their school lunches and at other meals during the week of January 7. In all, 15 (75%) of 20 persons who ate the sausage became ill, and none of 5 persons who did not eat the sausage became ill. Samples of the remaining sausage and of pork chops from the same carcass were tested; all were positive for *Trichinella spiralis* larvae.

Further investigation revealed that Family 1 had a drove of 30 brood sows and approximately 300 barrows and gilts. On February 21, 1973, all 30 sows were bled; subsequent bentonite flocculation titer results were negative. Between February 21 and 28, 8 adult rats (*Rattus norvegicus*) were trapped, and tongue-diaphragm tissues were submitted for larval studies; these results were also negative. A history of the operation revealed no previous garbage feeding practices and generally a "closed" herd management for the past several years, ruling out possible trichinae exposure at another location.

Figure 1  
TRICHINOSIS CASES, BY DATE OF ONSET\*  
WEST POINT, NEBRASKA — JANUARY 1973



(Reported by Eugene L. Sucha, M.D., and Leonard J. Chadek, M.D., private physicians, West Point, Nebraska; William F. Rapp, M.S., Vector Control, H. E. McConnell, Dr. P.H., Laboratory Director, Russell W. Currier II, D.V.M., State Epidemiologist, and Henry D. Smith, M.D., Director of Health, Nebraska State Department of Health.)

## Editorial Note

In this outbreak, the infection in the swine was most likely acquired on the farm, and the source of infection is presumed to have been an infected wild animal. With garbage-fed pigs diminishing as a source of trichinosis in man in the United States, the occurrence of *T. spiralis* in wild animals has gained significance in the evaluation of the disease. Unfortunately, with the exception of extensive studies in Iowa (1) and Alaska (2), little attention has been given to the relationship of wildlife and the perpetuation of trichinosis among farm-raised swine in this country.

## References

1. Zimmerman WJ, Hubbard ED: Trichiniasis in wildlife of Iowa. *Amer J Epidemiol* 90:84-92, 1969
2. Rausch RL: Trichinosis in the Arctic. Springfield, Charles C. Thomas, 1970, pp. 348-373

### SURVEILLANCE SUMMARY

#### SALMONELLA VIRCHOW — England, Wales

Before 1967, human infections with *S. virchow* were uncommon in England and Wales. The records of the Salmonella and Shigella Reference Laboratory show an annual average of 11 identifications for the 5 years 1962-66. In 1967, 1968, and 1969 the annual figures were 51, 229, and 361, respectively.

In 1967 and 1968, most human isolations came from the northwest, and there was a large outbreak in the Liverpool area (1). In this outbreak, broiler chickens were shown to be the source of the infection, and investigators traced the serotype to a particular packing station, its broiler rearing units, and hatchery (2).

Further cases followed in the Midlands, and an outbreak caused the closure of a maternity unit (3). The mother, who introduced the infection into the unit, had consumed chickens which originated in the same packing station.

In 1969, the human cases were concentrated in the northwest, but there was some spread to the southern counties. In 1970, 1971, and 1972, there was a marked drop in

human infections due to *S. virchow*, with annual totals of 96, 95, and 80 recorded. Nevertheless, this serotype is still isolated from poultry, particularly broiler chickens.

(Reported by Dr. B. Rowe, Director, Salmonella and Shigella Reference Laboratory, Central Public Health Laboratory, Public Health Laboratory Service, London, England.)

## Editorial Note

The cause for the recent emergence of *S. virchow* in the United States (MMWR, Vol. 22, No. 18) is still under investigation.

## References

1. Semple AB, Turner GC, Lowry DMO: Outbreak of food poisoning caused by *Salmonella virchow* in spit-roasted chicken. *Brit Med J* 4:801-803, 1968
2. Brooksbank NH, Richards DW: *Salmonella virchow*. *State Vet J* 25:66-73, 1970
3. Rowe B, Giles C, Brown GL: Outbreak of gastroenteritis due to *Salmonella virchow* in a maternity hospital. *Brit Med J* 3:561-564, 1969

INTERNATIONAL NOTES  
QUARANTINE MEASURES

The following change should be made in the "Supplement — Vaccination Certificate Requirements for International Travel," MMWR, Vol. 22, No. 17:

## Angola

Insert the following note:

Cholera — Angola recommends vaccination.

## Errata

## Vol. 22, No. 22, p. 192

In the article, "Quarantine Measures, Ryukyu Islands," line 2, correct the symbol < (less than) to > (greater than).

## Vol. 22, No. 21, p. 184

In the Erratum, "Follow-up on Technical Problems with

FTA-ABS Test for Syphilis—Stability of Lyophilized Sorbent," correct the sentence to read: Studies by 2 commercial laboratories on the stability of liquid sorbent have shown that it has no measurable loss of activity when stored for periods of 24-36 months, thus confirming earlier studies (1).

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Director, Center for Disease Control  
Director, Epidemiology Program, CDC  
Editor, MMWR

David J. Sencer, M.D.  
Philip S. Brachman, M.D.  
Michael B. Gregg, M.D.

The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to:

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Attn: Editor  
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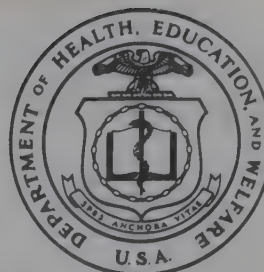
U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
PUBLIC HEALTH SERVICE  
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# Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

DATE OF RELEASE: JUNE 22, 1973 — ATLANTA, GEORGIA 30333

## INTERNATIONAL NOTES FOLLOW-UP ON LASSA FEVER — Sierra Leone

In September and October 1972, epidemiologic investigations of an outbreak of Lassa fever were conducted in the Panguma-Tongo area, Eastern Province, Sierra Leone (MMWR, Vol. 21, No. 45). By review of hospital records, a total of 63 human cases were identified between October 1, 1970, and October 1, 1972. The monthly incidence was highest during the summer (rainy) months of 1972. Twelve patients hospitalized during the investigations were subsequently confirmed as having Lassa fever by virus isolation, positive serologic tests, or both. The overall attack rate in Panguma and Tongo was 2.2 per thousand. The case-fatality rate was 38% among hospitalized patients. Results of a serum survey showed that complement fixing antibody was present in 13.1% of persons inhabiting households with cases and in 6.3% of persons inhabiting households from which no cases were recognized.

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Wild vertebrates were collected in an attempt to identify a nonhuman cycle of virus transmission. The studies focused on rodents and bats, since these hosts have been implicated in the ecology of certain arenaviruses antigenically related to Lassa virus [Machupo (Bolivian Hemorrhagic Fever) lymphocytic choriomeningitis, and Tacaribe viruses].

A total of 615 small vertebrates (480 rodents, 110 bats, 23 insectivores, and 2 reptiles) were collected in Panguma and Tongo. Table 1 shows the distribution of rodent species

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	24th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 24 WEEKS		
	June 16, 1973	June 17, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	52	45	58	938	886	574
Brucellosis	1	8	4	59	70	72
Chickenpox	4,306	3,491	—	133,740	101,696	—
Diphtheria	3	1	1	91	50	80
Encephalitis, primary:						
Arthropod-borne and unspecified	24	18	19	494	378	451
Encephalitis, post-infectious	5	7	8	137	133	164
Hepatitis, serum (Hepatitis B)	167	150	150	3,611	4,370	3,265
Hepatitis, infectious (Hepatitis A)	855	1,000	1,000	23,634	26,242	25,937
Malaria	7	9	42	111	569	1,202
Measles (rubeola)	790	813	813	21,242	23,494	23,494
Meningococcal infections, total	25	19	41	794	763	1,470
Civilian	24	19	39	775	730	1,322
Military	1	—	1	19	33	151
Mumps	1,502	1,366	2,186	47,691	49,562	64,868
Rubella (German measles)	683	507	1,134	23,640	18,356	37,756
Tetanus	1	3	3	37	42	49
Tuberculosis, new active	597	654	—	14,742	15,231	—
Tularemia	1	3	2	37	48	48
Typhoid fever	10	14	8	357	142	127
Typhus, tick-borne (Rky. Mt. spotted fever)	31	29	28	171	118	91
Venereal Diseases:						
Gonorrhea	15,929	16,429	—	355,788	317,692	—
Syphilis, primary and secondary	438	501	—	12,139	11,100	—
Rabies in animals	85	79	64	1,727	2,097	1,772

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	2
Botulism:	11	Paralytic:	2
Congenital rubella syndrome: Calif.-3	14	Psittacosis: Neb.-1	9
Leprosy:	49	Rabies in man:	—
Leptospirosis:	13	Trichinosis: Calif.-3	41
Plague:	—	Typhus, murine: *	13

\*Data for Typhus murine: Ark. 1

## LASSA FEVER — Continued

Table 1  
Distribution of Rodent Species Collected in  
Panguma and Tongo, Sierra Leone — 1972

Species	Percent of Species Collected by Town		
	Panguma (N=396)	Tongo (N=84)	Total (N=480)
<i>Mus musculus</i>	45.6	19.1	41.0
<i>Mastomys natalensis</i>	15.6	57.1	22.9
<i>Rattus rattus</i>	17.6	4.7	15.5
<i>Mus musculoides</i>	7.7	1.2	6.8
<i>Lophoromys sikapusi</i>	4.0	9.5	5.0
<i>Cricetomys gambianus</i>	3.3	2.4	3.1
<i>Praomys tullbergi</i>	1.3	2.4	1.5
<i>Hylomyscus simus</i>	1.3	0	1.0
<i>Euxerus erythropus</i>	0.5	3.6	1.0
<i>Dasymys incomptus</i>	0.8	0	0.6
<i>Myomys daltoni</i>	0.8	0	0.6
<i>Hybomys univittatus</i>	0.3	0	0.2
<i>Uranomys ruddi</i>	0.3	0	0.2
<i>Threonomys swinderianus</i>	0.3	0	0.2
<i>Funisciurus pyrrhopus</i>	0.3	0	0.2
Unidentified rodent	0.3	0	0.2

in the collection. Of the 6 species captured most frequently, 3 (*Mus musculoides*, *Lophoromys sikapusi*, and *Cricetomys gambianus*) were trapped only in the bush at some distance from houses. In contrast, *M. musculus* and *Rattus rattus* were almost exclusively domestic, whereas *Mastomys natalensis* was trapped both inside houses and in gardens and forest surrounding the villages.

Pooled tissues (heart, lung, spleen, and kidney) from each animal were frozen in liquid nitrogen and returned to CDC for viral studies. To date, 325 specimens have been tested for virus by inoculation of tissue suspensions into Vero cell cultures.

Ten isolations identified by the complement fixation test as Lassa virus have been made (Table 2); all were from the same rodent species, *M. natalensis*. Of 193 rodents of 14

Table 2  
Results of Tests for Lassa Virus in Rodent Tissues Collected in  
Panguma and Tongo, Sierra Leone — 1972

Species	Panguma	Tongo	Total
<i>Mus musculus</i>	0/96*	0/8	0/104
<i>Mastomys natalensis</i>	1/26	9/20	10/46
<i>Rattus rattus</i>	0/33	0/4	0/37
<i>Mus musculoides</i>	0/19	0/1	0/20
<i>Lophoromys sikapusi</i>	0/8	0/2	0/10
<i>Cricetomys gambianus</i>	0/5	0/2	0/7
Other species	0/15	—	0/15
Total Rodents	1/202	9/37	10/239

\*No. positive/No. tested

other species, 15 shrews, 58 bats, and 1 turtle tested, none were positive.

The isolation rate in *Mastomys* collected in Panguma (1/26) was lower than that in Tongo (9/20). Eight of the 10 isolates were from *Mastomys* trapped in 2 households in Tongo inhabited by Lassa fever patients hospitalized during the epidemiologic investigations. In 1 of these households, 7 of 8 *Mastomys* tested were positive; the only other rodent species trapped in this household was *M. musculus*, and none of 5 tested were positive.

(Reported by the Arbovirology Section, Virology Branch, Laboratory Division, and the Epidemiology Program, CDC.)

## Editorial Note

These results suggest that a single rodent species, *M. natalensis* may play a role in the natural history of Lassa fever. It has not been determined, however, whether rodent-to-man transmission is an important means of maintaining or initiating epidemic spread or whether person-to-person transmission, as occurred in nosocomial outbreaks in Liberia and Nigeria, is relatively more important. Biological studies to define the population dynamics and life history of *Mastomys* and experimental studies to determine whether chronic Lassa virus infection and excretion occur are required. However, formulation of a preliminary basis for control of the disease by reducing rodent populations seems warranted.

# EPIDEMIOLOGIC NOTES AND REPORTS SHIGA DYSENTERY — California

On May 2, 1973, a 34-year-old American airline pilot had fever, severe abdominal cramping, and bloody diarrhea while visiting Puerto Vallarta, Mexico. He returned to Los Angeles, California, May 4 and was hospitalized the following day. A stool specimen obtained on admission grew *Shigella dysenteriae* type 1 (Shiga bacillus). He was treated with intravenous fluids and tetracycline; however, after 3 days of therapy without improvement, tetracycline was discontinued and parenteral ampicillin begun, with prompt remission of symptoms. He became asymptomatic and was discharged the following week.

The patient's wife also became ill with diarrhea on May 2, but her symptoms were less severe. Her stool specimen was negative for enteric pathogens. She was treated empirically with ampicillin and improved promptly.

The patient and his wife had arrived in Puerto Vallarta on April 29. They ate only in restaurants with good hygienic conditions and avoided tap water. However, on May 1 they traveled to Yalapa, a primitive Indian village, where they ate fresh fruit cocktail, salad, and fish.

(Reported by Ronald M. Sommer, M.D., private physician, Redondo Beach, California; Ralph M. Sachs, M.D., Deputy

Director, Ichiro Kamei, M.D., Chief, Division of Acute Communicable Disease Control, Los Angeles County Community Health Service; S. Benson Werner, M.D., Medical Epidemiologist, James Chin, M.D., State Epidemiologist, Bureau of Communicable Disease Control, California State Department of Public Health; and 2 EIS Officers.)

## Editorial Note

Shiga dysentery is a serious intestinal illness characterized by mucoid bloody diarrhea, abdominal cramping, and tenesmus, with or without fever. The majority of U.S. citizens who contracted this illness in the past year have given histories of travel to or contact with someone from Mexico. Many travelers who have been affected have been cautious about their diet, and their source of exposure is less clear than in this case, indicating that the infectious dose may be small or that not all sources of potential contamination have been elucidated. The Mexican epidemic strain of *S. dysenteriae* 1 carries an R factor that confers resistance to chloramphenicol, tetracycline, streptomycin, and sulfadiazine. Although ampicillin resistance has become a major problem in the treatment of enteritis caused by other *Shigella* species, ampicillin remains the drug of choice in the treatment of Shiga dysentery.

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JUNE 16, 1973 AND JUNE 17, 1972 (24th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES . . . . .	52	1	4,306	3	91	24	18	5	167	855	1,000
NEW ENGLAND . . . . .	3	-	709	-	3	2	4	-	7	69	77
Maine . . . *	-	-	1	-	-	-	-	-	-	-	15
New Hampshire . *	-	-	19	-	-	-	-	-	-	5	9
Vermont . . . . .	-	-	12	-	-	-	-	-	1	3	3
Massachusetts . . . . .	-	-	432	-	1	2	4	-	2	42	41
Rhode Island . . . . .	3	-	60	-	2	-	-	-	2	4	1
Connecticut . . . . .	-	-	185	-	-	-	-	-	2	15	8
MIDDLE ATLANTIC . . . . .	3	-	352	-	-	-	3	-	37	121	116
Upstate New York . . . . .	-	-	2	-	-	-	1	-	11	43	21
New York City . . . . .	2	-	164	-	-	-	-	-	5	26	33
New Jersey . . . *	-	-	NN	-	-	-	-	-	16	30	42
Pennsylvania . . . . .	1	-	186	-	-	-	2	-	5	22	20
EAST NORTH CENTRAL . . . . .	7	-	2,244	-	-	17	1	-	13	119	128
Ohio . . . . .	2	-	535	-	-	4	-	-	1	29	26
Indiana . . . . .	-	-	125	-	-	-	-	-	1	11	14
Illinois . . . . .	1	-	312	-	-	7	-	-	1	25	48
Michigan . . . . .	3	-	527	-	-	6	1	-	8	44	38
Wisconsin . . . . .	1	-	745	-	-	-	-	-	2	10	2
WEST NORTH CENTRAL . . . . .	3	1	360	-	7	-	-	1	5	23	48
Minnesota . . . *	1	-	67	-	-	-	-	1	2	1	4
Iowa . . . . .	-	-	60	-	-	-	-	-	-	5	4
Missouri . . . . .	2	1	22	-	-	-	-	-	2	12	27
North Dakota . . . . .	-	-	11	-	-	-	-	-	-	-	2
South Dakota . . . . .	-	-	-	-	7	-	-	-	-	-	1
Nebraska . . . . .	-	-	2	-	-	-	-	-	1	2	2
Kansas . . . . .	-	-	198	-	-	-	-	-	-	13	8
SOUTH ATLANTIC . . . . .	13	-	203	-	-	2	3	-	17	133	140
Delaware . . . . .	-	-	13	-	-	1	-	-	-	2	1
Maryland . . . . .	1	-	19	-	-	-	-	-	2	9	12
District of Columbia . . . . .	-	-	-	-	-	-	-	-	-	-	3
Virginia . . . . .	-	-	31	-	-	-	2	-	2	15	14
West Virginia . . . . .	1	-	110	-	-	-	1	-	-	3	6
North Carolina . . . . .	4	-	NN	-	-	-	-	-	2	24	36
South Carolina . . . . .	-	-	30	-	-	-	-	-	-	9	7
Georgia . . . . .	-	-	-	-	-	-	-	-	-	22	16
Florida . . . . .	7	-	-	-	-	1	-	-	11	49	45
EAST SOUTH CENTRAL . . . . .	2	-	116	-	-	1	5	-	14	78	80
Kentucky . . . . .	-	-	67	-	-	-	1	-	8	29	31
Tennessee . . . . .	-	-	NN	-	-	1	1	-	2	33	32
Alabama . . . . .	2	-	47	-	-	-	3	-	3	11	12
Mississippi . . . . .	-	-	2	-	-	-	-	-	1	5	5
WEST SOUTH CENTRAL . . . . .	5	-	111	-	7	-	-	-	9	96	94
Arkansas . . . *	-	-	5	-	-	-	-	-	-	-	3
Louisiana . . . *	3	-	NN	-	-	-	-	-	3	18	3
Oklahoma . . . . .	-	-	30	-	-	-	-	-	1	26	19
Texas . . . . .	2	-	76	-	7	-	-	-	5	52	69
MOUNTAIN . . . . .	-	-	110	-	2	-	-	-	3	20	49
Montana . . . . .	-	-	29	-	-	-	-	-	-	5	4
Idaho . . . . .	-	-	-	-	-	-	-	-	2	4	1
Wyoming . . . . .	-	-	-	-	-	-	-	-	-	-	1
Colorado . . . . .	-	-	50	-	-	-	-	-	-	5	2
New Mexico . . . . .	-	-	22	-	2	-	-	-	1	5	10
Arizona . . . . .	-	-	-	-	-	-	-	-	-	1	9
Utah . . . . .	-	-	9	-	-	-	-	-	-	-	9
Nevada . . . . .	-	-	-	-	-	-	-	-	-	-	13
PACIFIC . . . . .	16	-	101	3	72	2	2	4	62	186	268
Washington . . . . .	2	-	92	2	66	1	-	-	3	15	26
Oregon . . . . .	-	-	-	-	3	-	-	1	1	11	21
California . . . . .	14	-	-	1	3	1	1	3	58	158	213
Alaska . . . . .	-	-	9	-	-	-	1	-	-	2	2
Hawaii . . . . .	---	---	---	---	-	---	-	---	---	---	6
Guam . . . *	-	-	-	-	-	-	-	-	-	-	6
Puerto Rico . . . . .	-	-	21	-	-	-	-	-	-	10	20
Virgin Islands . . . . .	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: Guam 1  
 Chickenpox: Me. 12, Ark. 3, Guam 5  
 Encephalitis, post-infections: La. delete 1  
 Hepatitis B: Minn. 1, La. delete 1  
 Hepatitis A: Me. 3, N.H. 1, N.J. delete 2,  
 Minn. delete 1, Ark. 2, Guam 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JUNE 16, 1973 AND JUNE 17, 1972 (24th WEEK) — Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	7	111	790	21,242	23,494	25	794	763	1,502	47,691	683	23,640
NEW ENGLAND .....	-	9	83	6,979	2,516	1	35	33	88	2,219	67	3,388
Maine *	-	-	-	46	227	-	-	3	-	210	-	66
New Hampshire .....	-	-	3	823	221	-	6	2	1	163	3	350
Vermont .....	-	2	3	108	103	-	2	-	15	237	2	43
Massachusetts .....	-	3	31	3,751	471	-	11	17	20	705	33	1,905
Rhode Island .....	-	-	18	552	486	-	1	9	7	250	1	203
Connecticut .....	-	4	28	1,699	1,008	1	15	2	45	654	28	821
MIDDLE ATLANTIC .....	-	16	165	1,930	820	5	114	92	219	6,097	164	3,819
Upstate New York .....	-	10	101	622	112	-	40	22	NN	NN	17	355
New York City .....	-	1	22	782	194	2	22	27	118	3,623	21	382
New Jersey .....	-	1	32	281	465	2	27	20	79	1,367	109	2,808
Pennsylvania .....	-	4	10	245	49	1	25	23	22	1,107	17	274
EAST NORTH CENTRAL .....	-	16	407	7,377	9,557	6	101	101	329	12,814	273	5,331
Ohio .....	-	2	8	245	217	1	43	36	102	2,485	37	641
Indiana .....	-	3	13	522	1,145	1	3	10	12	1,003	18	885
Illinois .....	-	8	97	1,717	3,537	1	21	24	24	2,151	61	838
Michigan .....	-	3	234	3,886	1,665	3	29	27	118	3,590	108	1,584
Wisconsin .....	-	-	55	1,007	2,993	-	5	4	73	3,585	49	1,383
WEST NORTH CENTRAL .....	-	4	9	412	897	1	65	60	140	4,235	7	1,148
Minnesota .....	-	1	1	16	16	1	3	13	-	75	4	204
Iowa .....	-	-	8	267	637	-	15	2	33	2,733	1	175
Missouri .....	-	1	-	47	153	-	30	18	11	519	1	245
North Dakota .....	-	1	-	52	48	-	3	-	1	62	-	269
South Dakota .....	-	-	-	-	4	-	3	2	-	13	1	22
Nebraska .....	-	-	-	3	18	-	4	9	3	91	-	138
Kansas .....	-	1	-	27	21	-	7	16	92	742	-	95
SOUTH ATLANTIC .....	2	14	20	979	1,896	1	129	173	184	5,585	29	1,701
Delaware .....	-	-	3	8	38	-	-	1	11	239	-	8
Maryland .....	-	-	-	2	14	-	19	31	14	541	-	9
District of Columbia .....	-	-	-	3	2	-	3	7	1	38	-	2
Virginia .....	-	4	7	392	55	1	22	42	15	558	7	384
West Virginia .....	-	-	3	174	220	-	2	6	69	1,935	5	255
North Carolina .....	1	4	-	4	28	-	27	24	NN	NN	2	194
South Carolina .....	-	1	-	51	207	-	10	14	1	328	2	76
Georgia .....	1	1	-	40	135	-	17	3	-	25	-	7
Florida .....	-	4	7	305	1,197	-	29	45	73	1,921	13	766
EAST SOUTH CENTRAL .....	1	3	20	568	967	8	79	60	261	3,522	72	1,155
Kentucky .....	-	-	7	357	484	4	30	20	50	1,073	4	367
Tennessee .....	-	-	5	157	183	4	31	22	121	1,546	51	443
Alabama .....	1	3	-	4	127	-	13	12	90	455	14	176
Mississippi .....	-	-	8	50	173	-	5	6	-	448	3	169
WEST SOUTH CENTRAL .....	-	9	1	604	1,286	-	121	93	80	3,020	9	1,345
Arkansas .....	-	-	-	67	12	-	12	8	12	309	-	107
Louisiana .....	-	2	1	82	79	-	25	28	7	57	-	94
Oklahoma .....	-	1	-	48	9	-	11	6	23	355	5	165
Texas .....	-	6	-	407	1,186	-	73	51	38	2,299	4	979
MOUNTAIN .....	-	7	23	472	1,629	-	20	13	19	2,185	9	2,283
Montana .....	-	1	1	13	12	-	4	2	2	201	3	486
Idaho .....	-	-	4	223	18	-	1	3	-	109	-	27
Wyoming .....	-	-	15	25	45	-	-	1	-	417	-	5
Colorado .....	-	1	-	90	484	-	5	2	8	349	5	1,512
New Mexico .....	-	1	3	104	101	-	3	1	9	868	1	168
Arizona *	-	4	-	16	817	-	3	1	-	140	-	17
Utah .....	-	-	-	1	152	-	2	2	-	94	-	65
Nevada .....	-	-	-	-	-	-	2	1	-	7	-	3
PACIFIC .....	4	33	62	1,921	3,926	3	130	138	182	8,014	53	3,470
Washington .....	-	2	35	888	933	-	15	11	13	1,358	1	609
Oregon .....	-	2	10	405	57	-	10	11	-	1,452	27	733
California .....	4	26	17	549	2,837	3	101	108	137	4,386	25	2,098
Alaska .....	-	2	-	65	11	-	4	5	32	612	-	9
Hawaii .....	---	1	---	14	88	---	-	3	---	206	---	21
Guam .....	-	-	-	4	2	-	-	11	-	6	-	6
Puerto Rico .....	-	-	54	1,507	492	-	4	4	47	538	1	22
Virgin Islands .....	-	-	-	-	1	-	-	2	1	16	-	2

\*Delayed reports: Measles: Ariz. 1  
Mumps: Me. 10

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JUNE 16, 1973 AND JUNE 17, 1972 (24th WEEK) - Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES .....	37	597	14,742	37	10	357	31	171	15,929	438	85	1,727
NEW ENGLAND .....	2	19	526	-	-	5	-	1	591	12	1	84
Maine .....	-	1	39	-	-	-	-	-	21	-	1	50
New Hampshire .....	-	1	32	-	-	-	-	-	20	-	-	27
Vermont .....	-	1	16	-	-	-	-	-	9	-	-	3
Massachusetts .....	-	5	283	-	-	5	-	1	372	4	-	4
Rhode Island .....	1	2	41	-	-	-	-	-	67	2	-	-
Connecticut .....	1	9	115	-	-	-	-	-	102	6	-	-
MIDDLE ATLANTIC .....	5	97	3,023	-	3	31	-	8	1,874	96	1	10
Upstate New York .....	-	19	530	-	-	4	-	5	238	5	1	5
New York City .....	3	42	1,150	-	3	13	-	1	856	52	-	-
New Jersey .....	2	20	536	-	-	6	-	1	329	21	-	-
Pennsylvania .....	-	16	807	-	-	8	-	1	451	18	-	5
EAST NORTH CENTRAL .....	4	53	2,232	-	-	17	-	1	2,035	26	18	167
Ohio ..*	1	23	691	-	-	5	-	1	548	5	-	20
Indiana .....	-	-	306	-	-	-	-	-	367	9	2	44
Illinois .....	2	-	626	-	-	4	-	-	319	6	4	46
Michigan .....	-	30	532	-	-	6	-	-	593	6	-	3
Wisconsin .....	1	-	77	-	-	2	-	-	208	-	12	54
WEST NORTH CENTRAL .....	5	30	544	5	-	8	-	3	771	3	26	498
Minnesota .....	-	8	75	-	-	3	-	-	150	-	13	180
Iowa .....	-	2	47	-	-	-	-	1	98	1	1	114
Missouri .....	4	10	251	5	-	3	-	2	217	2	5	43
North Dakota .....	1	2	19	-	-	-	-	-	16	-	6	83
South Dakota .....	-	1	37	-	-	1	-	-	51	-	-	32
Nebraska ..*	-	1	40	-	-	1	-	-	110	-	1	3
Kansas .....	-	6	75	-	-	-	-	-	129	-	-	43
SOUTH ATLANTIC .....	5	142	2,882	6	-	220	17	88	4,001	161	5	140
Delaware .....	-	-	32	-	-	-	1	4	57	5	-	1
Maryland .....	-	12	281	-	-	4	-	1	405	5	-	7
District of Columbia .....	-	4	138	-	-	-	-	-	346	16	-	-
Virginia .....	-	22	395	1	-	-	-	18	463	52	3	47
West Virginia .....	-	3	141	-	-	2	-	-	54	-	1	16
North Carolina .....	-	24	452	1	-	3	10	41	573	12	-	1
South Carolina .....	-	5	261	-	-	3	1	11	316	15	-	1
Georgia .....	1	24	494	3	-	1	5	13	709	11	1	45
Florida .....	4	48	688	1	-	207	-	-	1,078	45	-	22
EAST SOUTH CENTRAL .....	7	77	1,313	5	4	11	7	25	1,263	23	5	305
Kentucky .....	1	20	326	1	1	2	-	-	186	2	1	162
Tennessee .....	4	19	402	3	1	5	5	17	482	7	1	107
Alabama .....	2	4	333	-	-	2	-	3	231	5	3	36
Mississippi .....	-	34	252	1	2	2	2	5	364	9	-	-
WEST SOUTH CENTRAL .....	6	72	1,473	20	-	12	7	41	2,460	60	14	348
Arkansas ..*	-	10	175	8	-	2	-	7	140	5	2	80
Louisiana .....	2	3	252	-	-	3	-	-	540	18	3	23
Oklahoma .....	2	4	133	10	-	2	6	33	91	4	4	115
Texas .....	2	55	913	2	-	5	1	1	1,689	33	5	130
MOUNTAIN .....	-	25	481	-	-	5	-	-	543	18	-	17
Montana .....	-	1	16	-	-	2	-	-	21	-	-	-
Idaho .....	-	-	22	-	-	-	-	-	32	-	-	-
Wyoming .....	-	1	9	-	-	-	-	-	7	1	-	-
Colorado .....	-	8	94	-	-	-	-	-	154	4	-	-
New Mexico .....	-	5	107	-	-	1	-	-	89	-	-	2
Arizona ..*	-	10	184	-	-	2	-	-	148	1	-	15
Utah .....	-	-	17	-	-	-	-	-	43	-	-	-
Nevada .....	-	-	32	-	-	-	-	-	49	12	-	-
PACIFIC .....	3	82	2,268	1	3	48	-	4	2,391	39	15	158
Washington .....	-	6	196	-	1	4	-	2	244	4	-	-
Oregon .....	-	5	121	-	-	2	-	2	223	1	-	1
California .....	3	71	1,772	1	2	41	-	-	1,845	33	15	150
Alaska .....	-	-	54	-	-	-	-	-	79	1	-	7
Hawaii .....	-	---	125	-	---	1	---	-	---	---	---	-
Guam ..*	-	-	16	-	-	-	-	-	-	-	-	-
Puerto Rico .....	3	8	245	-	-	2	-	-	105	8	2	23
Virgin Islands .....	-	-	-	-	-	-	-	-	10	1	-	-

\*Delayed reports: TB: Ohio delete 2  
Tularemia: Ark. 3  
RMSF: Ark. 4  
Gonorrhea: Ariz. 35, Guam 5  
Syphilis: Neb. 1

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING JUNE 16, 1973

Week No.

24

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	741	456	28	44	SOUTH ATLANTIC	1,207	627	53	46
Boston, Mass.	245	131	9	12	Atlanta, Ga.	141	75	7	4
Bridgeport, Conn.	42	28	1	9	Baltimore, Md.	217	106	12	3
Cambridge, Mass.	30	20	2	8	Charlotte, N. C.	48	14	6	1
Fall River, Mass.	27	17	3	-	Jacksonville, Fla.	94	45	4	2
Hartford, Conn.	50	33	1	-	Miami, Fla.	84	43	4	4
Lowell, Mass.	26	18	-	1	Norfolk, Va.	52	28	-	4
Lynn, Mass.	20	12	-	1	Richmond, Va.	103	64	3	8
New Bedford, Mass.	24	18	-	2	Savannah, Ga.	35	18	-	2
New Haven, Conn.	60	32	6	-	St. Petersburg, Fla.	89	67	3	2
Providence, R. I.	67	46	-	7	Tampa, Fla.	77	37	2	6
Somerville, Mass.	9	5	-	-	Washington, D. C.	213	93	8	6
Springfield, Mass.	51	30	3	2	Wilmington, Del.	54	37	4	4
Waterbury, Conn.	32	24	2	-	EAST SOUTH CENTRAL	656	370	18	28
Worcester, Mass.	58	42	1	2	Birmingham, Ala.	99	58	2	2
MIDDLE ATLANTIC	2,976	1,805	99	115	Chattanooga, Tenn.	60	39	1	3
Albany, N. Y.	53	32	4	2	Knoxville, Tenn.	52	35	-	-
Allentown, Pa.	32	23	2	3	Louisville, Ky.	124	76	2	9
Buffalo, N. Y.	129	80	5	8	Memphis, Tenn.	153	77	8	3
Camden, N. J.	46	31	1	5	Mobile, Ala.	47	21	1	2
Elizabeth, N. J.	33	27	-	2	Montgomery, Ala.	28	15	1	1
Erie, Pa.	47	28	1	4	Nashville, Tenn.	93	49	3	8
Jersey City, N. J.	55	32	2	5	WEST SOUTH CENTRAL	1,161	640	46	27
Newark, N. J.	91	53	4	3	Austin, Tex.	33	18	-	1
New York City, N. Y. †	1,662	973	53	47	Baton Rouge, La.	43	21	1	1
Paterson, N. J.	41	24	2	2	Corpus Christi, Tex.	28	15	2	-
Philadelphia, Pa.	194	108	12	3	Dallas, Tex.	141	68	4	1
Pittsburgh, Pa.	161	98	4	9	El Paso, Tex.	40	22	3	2
Reading, Pa.	34	28	1	1	Fort Worth, Tex.	92	58	3	2
Rochester, N. Y.	127	85	4	11	Houston, Tex.	234	113	9	4
Schenectady, N. Y.	20	13	-	-	Little Rock, Ark.	70	41	5	3
Scranton, Pa.	40	30	-	2	New Orleans, La.	125	69	3	1
Syracuse, N. Y.	91	57	3	1	Oklahoma City, Okla. *	81	48	3	1
Trenton, N. J.	44	30	1	1	San Antonio, Tex.	140	81	8	5
Utica, N. Y.	27	18	-	3	Shreveport, La.	47	28	1	-
Yonkers, N. Y.	49	35	-	3	Tulsa, Okla.	87	58	4	6
EAST NORTH CENTRAL	2,549	1,447	125	70	MOUNTAIN	530	280	29	18
Akron, Ohio	63	41	4	-	Albuquerque, N. Mex.	59	26	1	4
Canton, Ohio	47	33	-	2	Colorado Springs, Colo.	27	12	4	4
Chicago, Ill.	661	366	38	15	Denver, Colo.	128	71	3	4
Cincinnati, Ohio	167	84	12	4	Las Vegas, Nev.	37	14	2	-
Cleveland, Ohio	210	115	6	1	Ogden, Utah	13	9	-	1
Columbus, Ohio	129	70	9	4	Phoenix, Ariz.	136	71	11	1
Dayton, Ohio	101	60	3	-	Pueblo, Colo.	18	9	3	3
Detroit, Mich.	355	172	29	8	Salt Lake City, Utah	55	35	5	1
Evansville, Ind.	49	36	1	4	Tucson, Ariz.	57	33	-	-
Fort Wayne, Ind.	67	41	6	3	PACIFIC	1,547	947	52	30
Gary, Ind.	20	11	1	3	Berkeley, Calif.	18	15	-	-
Grand Rapids, Mich.	52	32	1	5	Fresno, Calif.	62	34	5	-
Indianapolis, Ind.	166	92	7	4	Glendale, Calif.	34	23	1	1
Madison, Wis.	33	19	1	5	Honolulu, Hawaii	46	26	5	1
Milwaukee, Wis.	117	75	2	-	Long Beach, Calif.	89	61	-	1
Peoria, Ill.	30	22	1	-	Los Angeles, Calif.	443	277	15	8
Rockford, Ill.	39	24	3	9	Oakland, Calif.	72	40	1	1
South Bend, Ind.	54	35	-	-	Pasadena, Calif.	45	29	1	-
Toledo, Ohio	113	74	-	1	Portland, Oreg.	139	85	2	4
Youngstown, Ohio	76	45	1	2	Sacramento, Calif.	49	26	3	1
WEST NORTH CENTRAL	843	509	32	28	San Diego, Calif.	123	70	7	1
Des Moines, Iowa	58	37	-	3	San Francisco, Calif.	170	102	7	5
Duluth, Minn.	32	25	1	3	San Jose, Calif.	49	34	-	1
Kansas City, Kans.	24	10	3	-	Seattle, Wash.	129	67	3	1
Kansas City, Mo.	130	85	4	-	Spokane, Wash.	46	31	2	2
Lincoln, Nebr.	25	20	-	3	Tacoma, Wash.	33	27	-	3
Minneapolis, Minn.	121	81	3	1	Total	12,210	7,081	482	406
Omaha, Nebr.	88	43	8	-	Expected Number	12,342	7,021	543	391
St. Louis, Mo.	196	119	3	5	Cumulative Total (includes reported corrections for previous weeks)	319,079	189,231	11,693	14,192
St. Paul, Minn.	104	58	8	2					
Wichita, Kans.	65	31	2	11					

†Delayed report for Week ending June 9, 1973

\*Estimate based on average percent of divisional total

RECOMMENDATION OF THE PUBLIC HEALTH SERVICE  
ADVISORY COMMITTEE ON IMMUNIZATION PRACTICES

## INFLUENZA VACCINE

## INTRODUCTION

Influenza occurs to some extent in the United States every year, but its incidence and the areas affected are quite variable. Periodically, influenza appears in epidemic form. This seems to occur when the antigens of prevalent influenza-viruses change sufficiently to render the population susceptible. Type A and type B influenzaviruses both undergo changes in their antigens. Such changes usually occur gradually, but they can be rapid and abrupt. Epidemics caused by type A influenzaviruses are more frequent and are generally more severe than those caused by type B.

Inactivated influenza vaccines\* have not been uniformly effective in the past, and whatever protection they afforded was relatively shortlived. Current vaccines contain more antigen than products available before 1972 and should provide good protection against influenza when the prevalent viruses are identical or similar to those in the vaccine.

Influenza vaccine should be given to chronically ill patients and to older persons in general. These 2 groups appear to be at greatest risk of becoming severely ill with influenza. Because some influenza occurs every year, annual vaccination of "high-risk" patients is indicated as a routine procedure regardless of the amount of influenza expected in any specific geographic area.

## INFLUENZAVIRUS VACCINES

## Bivalent Vaccine

The Bureau of Biologics, Food and Drug Administration, reviews influenza vaccine formulation regularly and recommends reformulation with contemporary antigens when indicated. Bivalent influenza vaccine this year will contain a new type A influenzavirus representative of currently prevalent "England" strains. Each adult dose of the 1973-74 vaccine will contain not less than 1000 chick cell agglutinating (CCA) units of antigen in the following proportion: 700 CCA units of a type A strain comparable to the prototype, A/England/42/72(H3N2),\*\* and 300 CCA units of a type B strain, B/Massachusetts/1/71. Vaccines from all producers are highly purified and should be relatively free from adverse reactions.

## Monovalent Type B Vaccine

Since late 1972, new strains of type B influenzavirus have been identified as the cause of characteristic influenza illness. They appeared first in Hong Kong in December 1972 and have since been recovered from influenza cases in Australia and England. It is too early to judge whether these strains will generally supplant currently prevalent type B viruses in the United States in the 1973-74 influenza season. However, it is reasonable to expect that they may become widely disseminated.

Since these type B antigens differ considerably from

prior strains, little natural immunity to them can be expected to exist in the general population. Likewise, the available bivalent influenza vaccine cannot be expected to give optimal protection against them.

Anticipating the possibility that these type B influenzaviruses will become widely prevalent in the United States, the Bureau of Biologics prepared guidelines for production of a monovalent type B influenza vaccine containing an antigen representative of the new strains. This monovalent vaccine is expected to be commercially available prior to the 1973-74 influenza season. It should be used as a supplemental vaccine for optimal protection of persons at high-risk who are already recommended to receive bivalent vaccine.

## VACCINE USAGE

## General Recommendations

Annual vaccination is recommended for persons of all ages who have such chronic conditions as 1) heart disease of any etiology, particularly with mitral stenosis or cardiac insufficiency; 2) chronic bronchopulmonary diseases, such as asthma, chronic bronchitis, bronchiectasis, and emphysema; and 3) diabetes mellitus and other chronic metabolic disorders.

Annual vaccination is recommended for older persons because influenza outbreaks are commonly associated with excess mortality in older age groups.

Vaccinating persons who provide essential community services may also be considered if local priorities justify. However, before undertaking such programs, those responsible should take into account a number of reasonable constraints: difficulties inherent in predicting influenza epidemics, variability in vaccine effectiveness, cost, availability of vaccine, and the chance that vaccine will be diverted from persons with chronic illnesses who are at particular risk.

## Schedule

The primary series of bivalent influenza vaccine has traditionally been 2 doses. Preliminary data indicate that with the more potent influenza vaccines available in recent years, the second dose provides little additional benefit. It is therefore reasonable to give a single dose of vaccine for either primary or annual booster vaccination. (Dose volumes for adults and children and the recommended route of administration are specified in the manufacturers' package labeling.)

A single dose of the supplemental monovalent type B influenza vaccine should follow and not be given simultaneously with bivalent vaccine. This is because the additional amount of antigen in the monovalent product might increase the chance of adverse reaction. Furthermore, separating the vaccines by 2 weeks or more might enhance an overall type B antibody response.

Influenza vaccination should be scheduled for completion by mid-November.

## Precautions

Influenza vaccines are prepared from viruses grown in embryonated eggs and ordinarily should not be administered to persons clearly hypersensitive to egg protein, ingested or injected.

\*Official name: Influenza Virus Vaccine, Bivalent

\*\*The World Health Organization has recommended a revised system of nomenclature for type A influenzaviruses which includes their strain designation and a description of the 2 surface antigens, hemagglutinin (H) and neuraminidase (N).

INTERNATIONAL NOTES  
QUARANTINE MEASURES

The following changes should be made in the "Supplement — United States Designated Yellow Fever Vaccination Centers," MMWR, Vol. 21, No. 20:

## CALIFORNIA

**Hollywood** World Wide Immunization Center 90028  
Change name to Medical Clinic for Immunization  
Change address to 7060 Hollywood Boulevard, Suite 910  
Change clinic hours to: By appointment;  
Monday, Tuesday and Friday, 4-5 p.m.;  
Wednesday and Thursday, 10-11 a.m.

## FLORIDA

**Bradenton** Manatee County Health Department 33505  
Change clinic hours to every Friday, 2 p.m.

**Clearwater** New Center — add  
Pinellas County Health Department  
1180 East Cleveland Street 33515  
813, 442-6151  
Clinic hours: Thursday, 8 a.m.-5 p.m.  
Fee charged

## MISSOURI

**Columbia** Student Health Service  
University of Missouri  
Change Zip Code to 65201

## NEW JERSEY

**Perth Amboy** New Center — add  
City Department of Health  
44 Market Street 08861  
201, 826-0290

Elizabeth

Clinic hours: Tuesday, 3-4 p.m.  
Fee charged

Port Medical Center 07201  
A fee is now charged

## NEW MEXICO

**Las Cruces** Student Health Center  
New Mexico State University 88003  
Change address from University Park  
to Las Cruces

## OHIO

**Columbus** Family Medicine Clinic  
University Hospitals 43210  
Change address to Means Hall  
466 West 10th Avenue

## TENNESSEE

**Chattanooga** Chattanooga-Hamilton County  
Health Department 37403  
Change clinic hours to Wednesday, 10-11 a.m.

## WISCONSIN

**Kohler** Medical Department  
Kohler Company 53044  
Center closed — delete

## Erratum, Vol. 22, No. 18, p. 159

In the article, "Follow-up on Chloramphenicol-Resistant *Salmonella typhi* — Mexico," correct the 6th sentence in the Editorial Note to read: "Ideally, tap water should not be consumed unless first boiled or treated with chemical purifiers such as Halazone or hypochlorite-containing bleach." Globaline, previously listed as a chemical purifier, is no longer manufactured.

The Morbidity and Mortality Weekly Report, circulation 35,000, is published by the Center for Disease Control, Atlanta, Ga.

Director, Center for Disease Control  
Director, Epidemiology Program, CDC  
Editor, MMWR

David J. Sencer, M.D.  
Philip S. Brachman, M.D.  
Michael B. Gregg, M.D.

The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to:

Center for Disease Control  
Attn: Editor  
Morbidity and Mortality Weekly Report  
Atlanta, Georgia 30333

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
PUBLIC HEALTH SERVICE  
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION  
CENTER FOR DISEASE CONTROL  
ATLANTA, GEORGIA 30333

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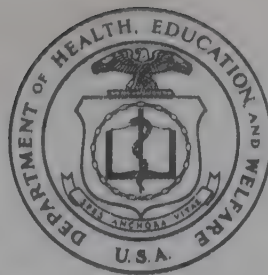
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K. Krishnakumari, Scientist  
Infestation Cont & Pesticides  
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India

421



# Morbidity and Mortality



Vol. 22, No. 25

WEEKLY  
REPORT

For  
Week Ending  
June 23, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

DATE OF RELEASE: JUNE 29, 1973 - ATLANTA, GEORGIA 30333

## • EPIDEMIOLOGIC NOTES AND REPORTS RABIES EXPOSURE - Kansas, Florida

In May and June 1973, reports of rabies exposure were received by CDC from Kansas and Florida; these 2 episodes are summarized below.

**Kansas:** In the first week of May 1973, 5 raccoon kittens, 5- to 6-weeks-old, were found on a farm near Nashville, Kansas. Three of the raccoons died within 2 weeks; none were examined by a veterinarian or pathologist. The last week in May, the fourth raccoon was exhibited to a class at the local school and handled by many of the children. Shortly thereafter, the raccoon refused to eat, and the family attempted to force-feed it by dipping their fingers in milk and then placing them in the raccoon's mouth. On June 6, the raccoon died. Its brain was examined at the State diagnostic laboratory and found to be positive for rabies by the fluorescent antibody (FA) method. The fifth raccoon was then

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killed and examined; it was negative for rabies. While no specific bite wounds were identified, 250 persons had possible exposure to rabies through intimate handling of the animal; 51 of the 250 persons were given post-exposure prophylaxis. (Reported by Giles Freeman, M.D., private physician, Pratt, Kansas; and Donald E. Wilcox, M.D., State Epidemiologist, Kansas State Department of Health.)

**Florida:** On May 20, 1973, Santa Fe College biologists trapped a wild bobcat near Gainesville, Florida. Later that day, 1 biologist was bitten by the animal, and another was scratched.

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	25th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 25 WEEKS		
	June 23, 1973	June 24, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	74	50	72	1,020	936	851
Brucellosis	19	4	6	78	74	77
Chickenpox	2,614	3,194	---	136,393	104,890	---
Diphtheria	1	1	1	92	51	82
Encephalitis, primary:						
Arthropod-borne and unspecified	18	32	21	512	410	467
Encephalitis, post-infectious	10	9	13	147	142	178
Hepatitis, serum (Hepatitis B)	180	166	141	3,795	4,536	3,406
Hepatitis, infectious (Hepatitis A)	935	971	971	24,599	27,213	26,924
Malaria	3	9	56	114	578	1,258
Measles (rubeola)	577	746	746	21,835	24,240	24,240
Meningococcal infections, total	24	28	40	818	791	1,510
Civilian	24	28	37	799	758	1,359
Military	---	---	3	19	33	157
Mumps	1,110	1,215	1,788	48,822	50,777	66,656
Rubella (German measles)	776	435	998	24,420	18,791	39,063
Tetanus	1	9	5	38	51	52
Tuberculosis, new active	645	728	---	15,396	15,959	---
Tularemia	7	1	5	44	49	49
Typhoid fever	9	6	6	366	148	131
Typhus, tick-borne (Rky. Mt. spotted fever)	41	24	22	213	142	115
Venereal Diseases:						
Gonorrhea	17,214	13,622	---	373,069	331,314	---
Syphilis, primary and secondary	560	443	---	12,701	11,543	---
Rabies in animals	79	77	64	1,806	2,174	1,830

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	2
Botulism: Ore.-2	13	Paralytic:	2
Congenital rubella syndrome:	14	Psittacosis:	9
Leprosy: Calif.-1	50	Rabies in man:	---
Leptospirosis:	13	Trichinosis:	41
Plague:	---	Typhus, murine: Neb.-1, Tex.-2	16

**RABIES – Continued**

On June 1, the bobcat was ill, and 1 of the biologists attempted to tube-feed it. The bobcat regurgitated the food back through the tube into the biologist's face and mouth. Later that day the bobcat suffered a respiratory arrest, and mouth-to-mouth resuscitation was performed; nevertheless, the bobcat died. Its brain was examined by the Florida Division of Health and found to be positive for rabies by the FA method. Fourteen persons who had close contact with the animal are currently receiving post-exposure prophylaxis.

(Reported by Clifford Cole, M.D., Director, Alachua County Health Department; J. Nichols, D.V.M., State Veterinarian, and Ralph B. Hogan, M.D., State Epidemiologist, Florida Division of Health.)

### HUMAN SALMONELLOSIS ASSOCIATED WITH CERTIFIED PET TURTLES Tennessee, Oregon, California

In April and May 1973, cases of turtle-associated salmonellosis were reported from Tennessee, Oregon, and California. The investigations of these cases are summarized below:

**Outbreak 1:** On May 5, 1973, a 5-month-old male infant from Chattanooga, Tennessee, became ill with fever and diarrhea. He was hospitalized on May 8, and a stool specimen obtained on admission yielded *Salmonella litchfield*. He was discharged on May 11. On May 14, a 3 1/2-year-old sister of the patient had fever and diarrhea, and *S. litchfield* was also isolated from her stool specimen. The parents of the 2 children were culture-negative, but 2 turtles in the home were found to be infected with *S. litchfield*.

The turtles, which had been purchased at a local pet store on April 20, were from a lot of 33,000 turtles (lot no. 27-10) bred at a Mississippi turtle farm and certified as free of salmonella and Arizona organisms by the Mississippi State Board of Health on February 22, 1973. Two containers with a total of 1,000 turtles from the original lot had been sent to Chattanooga via Kernsville, North Carolina, and subsequently distributed to pet stores in the area.

**Outbreak 2:** On April 5, 1973, a 16-year-old male from Portland, Oregon, became ill with fever, chills, headache, nausea, vomiting, abdominal cramps, and severe bloody diarrhea which lasted 6 days. He was hospitalized on April 11, and *S. braenderup* was isolated from a stool specimen. The patient's 9-year-old sister and 34-year-old mother had become ill with symptoms compatible with salmonellosis on March 12 and 25, respectively. Stool specimens from both were negative. A pet turtle, which had been purchased by the family on March 11 was found positive for *S. braenderup*. This turtle was from a lot of 13,000 turtles (lot no. 27-1) produced by the same Mississippi turtle farm and certified free of salmonella and Arizona organisms on August 21, 1972. Although no turtles from this lot were available at the pet store, 6 turtles recently received at the store from the Mississippi turtle farm were cultured, and *S. litchfield* was isolated from them. These turtles were from certified lot no. 27-10, the same lot incriminated in Tennessee.

**Outbreak 3:** On April 6, 1973, a 1-month-old male infant in Orange County, California, became ill with symptoms compatible with salmonellosis 3 weeks after the family purchased a pet turtle. *S. newport* was isolated from the child's stool specimen and also from the turtle. Two other turtles which had been in the household for several months were not cul-

**Editorial Note**

Wildlife rabies is endemic in the United States, especially in skunks, foxes, and raccoons. Many Americans will engage in activities this summer that may bring them into contact with wild animals. The reports from Kansas and Florida illustrate that wild animals, even if very young, are potentially dangerous. It should be emphasized that animals caught wild should not be handled by untrained personnel, should not be considered safe pets in the home, and may endanger the health of an entire family. In particular, sick wild animals should be handled only by skilled professionals. Extraordinary attempts to save their lives, such as administration of mouth-to-mouth resuscitation in the Florida episode, are strongly discouraged when human life is endangered.

The infected turtle was from a lot of 13,000 turtles (lot no. 27-4) bred at the Mississippi turtle farm. The lot had been certified as salmonella-free by the Mississippi State Board of Health, and 480 turtles of that lot had been shipped to California on February 27, 1973.

(Reported by Luther E. Fredrickson, D.V.M., State Public Health Veterinarian, Tennessee Department of Public Health; Monroe Holmes, D.V.M., State Public Health Veterinarian, Oregon State Board of Health; Tom Hamilton, M.D., Orange County, California, Health Department; George Humphrey, D.V.M., State Public Health Veterinarian, and S. Bertson Werner, M.D., Medical Epidemiologist, Bureau of Communicable Disease Control, California State Department of Public Health; and the Bacterial Diseases Branch, Epidemiology Program, CDC.)

**Editorial Note**

In a recent study, the New Jersey State Department of Health reported that of 16 batches of certified turtles collected in the state, 63% were positive for salmonella or Arizona organisms (MMWR, Vol. 22, No. 14). Health officials were unable to determine whether the certification procedure had failed to detect infected lots or whether turtles had become infected at the retail level. In this report, the finding of the same rare serotype, *S. litchfield*,\* in turtles from the same certified lot shipped to 2 different states strongly suggests that the certification procedure failed to detect salmonella contamination of the original lot.

Bacteriologic examination as prescribed in the Food and Drug Administration regulation may fail to detect contamination of turtles especially if the turtles have been pretreated prior to certification with antimicrobial agents such as copper sulfate. There is no established treatment that will permanently eradicate salmonella and Arizona infection in turtles, but antimicrobial treatment could make it impossible to detect infection in the turtles even when optimal laboratory methods are employed.

The 3 certified lots incriminated here represent a total of 59,000 potentially infected turtles. Human cases have been traced to 2 lots, and a third lot has been strongly implicated. This report supports the observation by New Jersey that certification does not guarantee a salmonella-free turtle and demonstrates that the common pet turtle is still a source of human infection despite the current Federal regulations.

\*In the period 1968-1972, *S. litchfield* comprised a mean of .6% of all salmonellae reported to CDC.

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JUNE 23, 1973 AND JUNE 24, 1972 (25th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES .....	74	19	2,614	1	92	18	32	10	180	935	971
NEW ENGLAND .....	3	-	527	-	3	1	-	2	4	68	88
Maine *	-	-	4	-	-	-	-	-	-	1	3
New Hampshire *	-	-	10	-	-	-	-	-	-	4	6
Vermont .....	-	-	7	-	-	-	-	-	-	4	3
Massachusetts .....	-	-	254	-	1	1	-	-	2	35	42
Rhode Island .....	3	-	47	-	2	-	-	1	1	12	21
Connecticut .....	-	-	205	-	-	-	-	1	1	12	13
MIDDLE ATLANTIC .....	2	-	103	-	-	2	7	2	33	140	128
Upstate New York .....	1	-	5	-	-	-	4	1	8	57	61
New York City .....	-	-	94	-	-	-	1	-	6	28	25
New Jersey *	-	-	NN	-	-	-	2	-	9	31	42
Pennsylvania .....	1	-	4	-	-	2	-	1	10	24	-
EAST NORTH CENTRAL .....	9	-	1,106	-	-	6	10	5	53	188	181
Ohio *	1	-	190	-	-	3	5	-	21	28	65
Indiana .....	-	-	67	-	-	-	1	-	-	16	4
Illinois .....	3	-	-	-	-	1	2	5	18	81	34
Michigan .....	5	-	353	-	-	2	2	-	14	59	74
Wisconsin .....	-	-	496	-	-	-	-	-	-	4	4
WEST NORTH CENTRAL .....	1	-	92	-	7	2	4	-	2	29	39
Minnesota *	1	-	-	-	-	-	-	-	-	1	3
Iowa .....	-	-	35	-	-	-	-	-	1	2	4
Missouri .....	-	-	14	-	-	2	4	-	-	12	19
North Dakota .....	-	-	15	-	-	-	-	-	-	-	1
South Dakota .....	-	-	1	-	7	-	-	-	-	6	2
Nebraska .....	-	-	3	-	-	-	-	-	-	1	-
Kansas .....	-	-	24	-	-	-	-	-	1	7	10
SOUTH ATLANTIC .....	5	3	230	-	-	-	3	-	12	141	120
Delaware .....	-	-	4	-	-	-	-	-	-	1	3
Maryland .....	-	-	22	-	-	-	-	-	1	14	-
District of Columbia .....	-	-	6	-	-	-	-	-	-	1	1
Virginia .....	2	-	34	-	-	-	-	-	2	17	8
West Virginia .....	-	-	113	-	-	-	-	-	-	9	2
North Carolina .....	1	1	NN	-	-	-	-	-	1	46	31
South Carolina .....	1	-	51	-	-	-	-	-	-	12	11
Georgia .....	-	2	-	-	-	-	-	-	-	19	9
Florida .....	1	-	-	-	-	-	3	-	8	22	55
EAST SOUTH CENTRAL .....	3	-	96	-	-	1	2	-	9	50	72
Kentucky .....	-	-	72	-	-	-	-	-	-	18	31
Tennessee .....	1	-	NN	-	-	-	2	-	3	28	33
Alabama .....	-	-	12	-	-	-	-	-	2	-	4
Mississippi .....	2	-	12	-	-	1	-	-	4	4	4
WEST SOUTH CENTRAL .....	15	2	177	-	7	3	4	1	8	127	100
Arkansas *	-	-	13	-	-	-	-	-	-	-	9
Louisiana *	11	-	NN	-	-	1	3	1	2	10	15
Oklahoma .....	1	-	18	-	-	2	-	-	2	35	15
Texas .....	3	2	146	-	7	-	1	-	4	82	61
MOUNTAIN .....	2	-	71	-	2	-	-	-	5	32	56
Montana .....	-	-	6	-	-	-	-	-	-	3	5
Idaho .....	1	-	-	-	-	-	-	-	1	-	5
Wyoming *	-	-	-	-	-	-	-	-	-	2	-
Colorado .....	1	-	13	-	-	-	-	-	3	12	29
New Mexico .....	-	-	34	-	2	-	-	-	-	8	4
Arizona *	-	-	-	-	-	-	-	-	-	-	4
Utah .....	-	-	18	-	-	-	-	-	1	7	8
Nevada *	-	-	-	-	-	-	-	-	-	-	1
PACIFIC .....	34	14	212	1	73	3	2	-	54	170	187
Washington .....	-	-	189	-	66	-	-	-	2	19	18
Oregon .....	-	-	1	-	3	-	-	-	1	16	18
California .....	34	14	-	-	3	3	2	-	51	123	145
Alaska .....	-	-	6	1	1	-	-	-	-	-	4
Hawaii *	-	-	16	-	-	-	-	-	-	2	2
Guam *	-	-	-	-	-	-	-	-	-	-	1
Puerto Rico .....	-	-	25	-	-	-	-	-	1	14	4
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: Ohio 8  
 Chickenpox Me. 1, Wyo. 1, Hawaii 37, Guam 13  
 Hepatitis B: Minn. 2, Ariz. 2

Hepatitis A: Me. 9, N.H. 2, N.J. delete 1, Minn. delete 2, Ark. 2,  
 La. delete 2, Ariz. 17, Nev. 3, Hawaii 2, Guam 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JUNE 23, 1973 AND JUNE 24, 1972 (25th WEEK) — Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	3	114	577	21,835	24,240	24	818	791	1,110	48,822	776	24,420
NEW ENGLAND .....	-	9	94	7,074	2,741	-	35	34	76	2,302	62	3,452
Maine *	-	-	-	46	227	-	-	3	5	215	-	68
New Hampshire *	-	-	2	826	222	-	6	2	10	180	-	350
Vermont .....	-	2	4	112	114	-	2	-	1	238	-	43
Massachusetts .....	-	3	44	3,795	513	-	11	17	16	721	41	1,946
Rhode Island .....	-	-	28	580	501	-	1	10	10	260	1	204
Connecticut .....	-	4	16	1,715	1,164	-	15	2	34	688	20	841
MIDDLE ATLANTIC .....	-	16	108	2,038	831	1	115	96	145	6,242	150	3,969
Upstate New York .....	-	10	52	674	115	1	41	23	NN	NN	7	362
New York City .....	-	1	16	798	201	-	22	30	113	3,736	10	392
New Jersey .....	-	1	33	314	466	-	27	20	18	1,385	130	2,938
Pennsylvania .....	-	4	7	252	49	-	25	23	14	1,121	3	277
EAST NORTH CENTRAL .....	-	16	211	7,588	9,881	5	106	106	269	13,083	156	5,487
Ohio .....	-	2	11	256	224	1	44	39	39	2,524	12	653
Indiana .....	-	3	10	532	1,152	-	3	10	24	1,027	3	888
Illinois .....	-	8	67	1,784	3,628	2	23	24	55	2,206	45	883
Michigan .....	-	3	94	3,980	1,771	2	31	29	91	3,681	47	1,631
Wisconsin .....	-	-	29	1,036	3,106	-	5	4	60	3,645	49	1,432
WEST NORTH CENTRAL .....	-	4	7	419	903	-	65	62	31	4,266	12	1,160
Minnesota .....	-	1	2	18	18	-	3	13	-	75	1	205
Iowa .....	-	-	5	272	638	-	15	2	9	2,742	5	180
Missouri .....	-	1	-	47	156	-	30	20	4	523	-	245
North Dakota .....	-	1	-	52	48	-	3	-	-	62	5	274
South Dakota .....	-	-	-	-	4	-	3	2	-	13	-	22
Nebraska .....	-	-	-	3	18	-	4	9	2	93	1	139
Kansas .....	-	1	-	27	21	-	7	16	16	758	-	95
SOUTH ATLANTIC .....	2	16	12	991	1,928	2	131	179	136	5,721	272	1,972
Delaware .....	-	-	-	8	43	-	-	1	4	243	-	8
Maryland .....	-	-	-	2	15	1	20	32	17	558	-	9
District of Columbia .....	-	-	-	3	2	-	3	7	3	41	-	2
Virginia .....	-	4	2	394	56	1	23	42	29	587	226	610
West Virginia .....	-	-	3	177	227	-	2	6	46	1,981	-	255
North Carolina .....	1	5	-	4	28	-	27	24	NN	NN	2	196
South Carolina .....	-	1	1	52	208	-	10	14	6	334	2	78
Georgia .....	1	2	2	42	135	-	17	3	-	25	-	7
Florida .....	-	4	4	309	1,214	-	29	50	31	1,952	42	808
EAST SOUTH CENTRAL .....	-	3	5	573	987	2	81	63	145	3,667	25	1,180
Kentucky .....	-	-	2	359	497	1	31	20	49	1,122	1	368
Tennessee .....	-	-	2	159	184	1	32	24	84	1,630	17	460
Alabama .....	-	3	-	4	127	-	13	13	8	463	2	178
Mississippi .....	-	-	1	51	179	-	5	6	4	452	5	174
WEST SOUTH CENTRAL .....	-	9	5	609	1,304	4	125	97	60	3,080	16	1,363
Arkansas *	-	-	1	68	13	-	12	8	6	315	-	109
Louisiana .....	-	2	-	82	80	1	26	30	-	57	4	98
Oklahoma .....	-	1	2	50	9	1	12	6	4	359	-	165
Texas .....	-	6	2	409	1,202	2	75	53	50	2,349	12	991
MOUNTAIN .....	-	7	33	520	1,655	3	23	13	53	2,239	9	2,292
Montana .....	-	1	-	13	12	1	5	2	2	203	1	487
Idaho .....	-	-	4	227	19	2	3	3	1	110	2	29
Wyoming *	-	-	21	61	51	-	-	1	-	418	-	5
Colorado .....	-	1	5	95	493	-	5	2	6	355	3	1,515
New Mexico .....	-	1	3	107	105	-	3	1	29	897	2	170
Arizona .....	-	4	-	16	823	-	3	1	-	140	-	17
Utah .....	-	-	-	1	152	-	2	2	15	109	1	66
Nevada .....	-	-	-	-	-	-	2	1	-	7	-	3
PACIFIC .....	1	34	102	2,023	4,010	7	137	141	195	8,222	74	3,544
Washington .....	-	2	61	949	962	1	16	11	27	1,385	18	627
Oregon .....	-	2	15	420	69	-	10	11	31	1,483	5	738
California .....	1	27	25	574	2,879	6	107	111	112	4,498	51	2,149
Alaska .....	-	2	-	65	11	-	4	5	25	637	-	9
Hawaii *	-	1	1	15	89	-	-	3	-	219	-	21
Guam *	-	-	-	7	2	-	-	11	-	15	-	6
Puerto Rico .....	-	-	33	1,540	507	-	4	4	16	554	1	23
Virgin Islands .....	-	-	-	-	1	-	-	2	-	16	-	2

\*Delayed reports: Measles: N.H. 1, Wyo. 15, Guam 3  
Mumps: Me. 7, Wyo. 1, Hawaii 13, Guam 9  
Rubella: Me. 2, Ark. 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JUNE 23, 1973 AND JUNE 24, 1972 (25th WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
									GONOR- RHEA	SYPHILIS (Pri. & Sec.)		
									1973	1973		
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	1973	1973	1973	Cum. 1973
UNITED STATES .....	38	645	15,396	44	9	366	41	213	17,214	560	79	1,806
NEW ENGLAND .....	2	15	542	-	-	5	-	1	428	12	1	85
Maine * .....	-	2	42	-	-	-	-	-	31	-	-	50
New Hampshire .....	-	-	32	-	-	-	-	-	17	-	-	27
Vermont .....	-	-	16	-	-	-	-	-	8	-	-	3
Massachusetts .....	-	6	289	-	-	5	-	1	225	6	-	4
Rhode Island .....	1	-	41	-	-	-	-	-	33	-	-	-
Connecticut .....	1	7	122	-	-	-	-	-	114	6	1	1
MIDDLE ATLANTIC .....	5	76	3,099	-	2	33	3	11	2,664	137	1	11
Upstate New York .....	-	9	539	-	1	5	1	6	605	13	-	5
New York City .....	3	20	1,170	-	1	14	-	1	1,234	68	-	-
New Jersey .....	2	14	550	-	-	6	-	1	278	33	-	-
Pennsylvania .....	-	33	840	-	-	8	2	3	547	23	1	6
EAST NORTH CENTRAL .....	4	91	2,323	2	1	18	-	1	1,662	18	6	173
Ohio .....	1	22	713	-	-	5	-	1	504	5	6	26
Indiana .....	-	-	306	-	-	-	-	-	168	3	-	44
Illinois .....	2	44	670	-	1	5	-	-	234	2	-	46
Michigan .....	-	25	557	2	-	6	-	-	561	7	-	3
Wisconsin .....	1	-	77	-	-	2	-	-	195	1	-	54
WEST NORTH CENTRAL .....	5	52	596	5	-	8	1	4	889	9	30	528
Minnesota .....	-	2	77	-	-	3	-	-	177	1	12	192
Iowa .....	-	13	60	-	-	-	-	1	126	4	4	118
Missouri .....	4	23	274	5	-	3	1	3	350	4	1	44
North Dakota .....	1	2	21	-	-	-	-	-	11	-	8	91
South Dakota .....	-	5	42	-	-	1	-	-	54	-	-	32
Nebraska .....	-	1	41	-	-	1	-	-	81	-	-	3
Kansas .....	-	6	81	-	-	-	-	-	90	-	5	48
SOUTH ATLANTIC .....	5	153	3,035	6	2	222	27	115	3,900	153	4	144
Delaware .....	-	1	33	-	-	-	-	4	86	-	-	1
Maryland .....	-	26	307	-	-	4	2	3	306	18	-	7
District of Columbia .....	-	4	142	-	-	-	-	-	366	17	-	-
Virginia .....	-	15	410	1	1	1	5	23	444	30	-	47
West Virginia .....	-	4	145	-	-	2	-	-	55	-	-	16
North Carolina .....	-	28	480	1	1	4	7	48	628	18	-	1
South Carolina .....	-	17	278	-	-	3	7	18	264	17	-	1
Georgia .....	1	21	515	3	-	1	6	19	939	20	2	47
Florida .....	4	37	725	1	-	207	-	-	812	33	2	24
EAST SOUTH CENTRAL .....	7	77	1,389	5	-	11	4	29	1,710	37	4	309
Kentucky * .....	1	7	332	1	-	2	-	-	169	3	3	165
Tennessee .....	4	30	432	3	-	5	1	18	517	16	1	108
Alabama .....	2	25	358	-	-	2	-	3	690	12	-	36
Mississippi .....	-	15	267	1	-	2	3	8	334	6	-	-
WEST SOUTH CENTRAL .....	7	57	1,530	25	1	14	5	46	2,637	45	18	366
Arkansas* .....	-	4	179	12	-	3	-	7	183	5	4	84
Louisiana * .....	2	6	258	-	-	3	-	-	536	16	1	24
Oklahoma .....	3	5	138	11	-	2	4	37	186	-	6	121
Texas .....	2	42	955	2	1	6	1	2	1,732	24	7	137
MOUNTAIN .....	-	12	495	-	-	4	-	1	414	7	-	17
Montana* .....	-	-	16	-	-	1	-	-	28	1	-	-
Idaho .....	-	-	22	-	-	-	-	-	61	-	-	-
Wyoming * .....	-	-	11	-	-	-	-	1	12	2	-	-
Colorado .....	-	-	94	-	-	-	-	-	146	1	-	-
New Mexico .....	-	4	111	-	-	1	-	-	100	-	-	2
Arizona .....	-	4	188	-	-	2	-	-	-	-	-	15
Utah .....	-	-	17	-	-	-	-	-	32	-	-	-
Nevada* .....	-	4	36	-	-	-	-	-	35	3	-	-
PACIFIC .....	3	112	2,387	1	3	51	1	5	2,910	142	15	173
Washington .....	-	9	205	-	-	4	-	2	204	3	1	1
Oregon .....	-	11	132	-	-	2	-	2	303	1	-	1
California .....	3	83	1,855	1	3	44	1	1	2,322	133	14	164
Alaska .....	-	-	54	-	-	-	-	-	36	2	-	7
Hawaii * .....	-	9	141	-	-	1	-	-	45	3	-	-
Guam * .....	-	-	16	-	-	-	-	-	-	-	-	-
Puerto Rico .....	4	6	251	-	-	2	-	-	48	13	-	23
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: TB: Me. 1, Ky. delete 1, Wyo. 2, Hawaii 7  
Typhoid: Ark. 1, Mont. delete 1  
RMSF: Wyo. 1

Gonorrhea: La. delete 2, Wyo. 40, Nev. 2,  
Hawaii 27, Guam 4  
Syphilis: Wyo. 1, Hawaii 1

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING JUNE 23, 1973

Week No.

25

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	722	443	22	42	SOUTH ATLANTIC	1,113	605	30	39
Boston, Mass.	205	119	8	10	Atlanta, Ga.	152	73	6	9
Bridgeport, Conn.	32	23	1	3	Baltimore, Md.	264	149	5	5
Cambridge, Mass.	30	18	-	6	Charlotte, N. C.	63	33	2	3
Fall River, Mass.	34	25	-	2	Jacksonville, Fla.	86	41	2	1
Hartford, Conn.	62	31	3	1	Miami, Fla.	96	49	3	2
Lowell, Mass.	28	20	1	3	Norfolk, Va.	62	27	1	5
Lynn, Mass.	22	11	1	-	Richmond, Va.	69	39	-	3
New Bedford, Mass.	27	19	-	1	Savannah, Ga.	42	21	1	3
New Haven, Conn.	65	28	3	2	St. Petersburg, Fla.	93	76	4	5
Providence, R. I.	62	42	2	6	Tampa, Fla.	82	44	2	4
Somerville, Mass.	12	10	-	-	Washington, D. C.	55	30	2	2
Springfield, Mass.	51	34	1	4	Wilmington, Del.	49	23	2	-
Waterbury, Conn.	28	19	2	-	EAST SOUTH CENTRAL	665	361	16	20
Worcester, Mass.	64	44	-	4	Birmingham, Ala.	116	70	7	1
MIDDLE ATLANTIC	3,279	1,996	97	116	Chattanooga, Tenn.	49	26	4	4
Albany, N. Y.	51	33	1	1	Knoxville, Tenn.	52	29	-	1
Allentown, Pa.	48	33	-	2	Louisville, Ky.	114	59	2	4
Buffalo, N. Y.	145	88	8	14	Memphis, Tenn.	125	65	1	4
Camden, N. J.	37	19	2	-	Mobile, Ala.	70	40	2	1
Elizabeth, N. J.	30	14	-	1	Montgomery, Ala.	27	15	-	3
Erie, Pa.	30	20	-	3	Nashville, Tenn.	112	57	-	2
Jersey City, N. J.	64	42	2	3	WEST SOUTH CENTRAL	1,328	689	64	25
Newark, N. J.	82	46	5	6	Austin, Tex.	53	39	4	2
New York City, N. Y.†	1,732	1,095	39	56	Baton Rouge, La.	39	15	2	2
Paterson, N. J.	62	34	9	6	Corpus Christi, Tex.	42	24	-	1
Philadelphia, Pa.	398	210	17	-	Dallas, Tex.	206	106	13	-
Pittsburgh, Pa.	198	114	4	10	El Paso, Tex.	40	16	4	-
Reading, Pa. *	43	30	1	3	Fort Worth, Tex.	83	45	6	-
Rochester, N. Y.	119	75	4	5	Houston, Tex.	260	126	9	3
Schenectady, N. Y.	13	8	-	-	Little Rock, Ark.	61	25	2	4
Scranton, Pa.	39	25	-	3	New Orleans, La.	154	79	11	-
Syracuse, N. Y.	79	46	2	-	Oklahoma City, Okla. *	93	52	4	1
Trenton, N. J.	45	28	2	1	San Antonio, Tex.	139	74	7	5
Utica, N. Y.	23	15	1	1	Shreveport, La.	73	39	1	-
Yonkers, N. Y.	41	21	-	1	Tulsa, Okla.	85	49	1	7
EAST NORTH CENTRAL	2,522	1,454	105	70	MOUNTAIN	500	298	23	29
Akron, Ohio	58	33	4	-	Albuquerque, N. Mex.	52	29	-	6
Canton, Ohio	41	25	1	2	Colorado Springs, Colo.	24	16	3	1
Chicago, Ill.	668	365	26	19	Denver, Colo.	116	76	-	7
Cincinnati, Ohio	165	95	4	3	Las Vegas, Nev.	43	23	5	-
Cleveland, Ohio	202	100	7	1	Ogden, Utah	14	10	1	-
Columbus, Ohio	137	82	4	5	Phoenix, Ariz.	126	74	9	3
Dayton, Ohio	98	64	1	-	Pueblo, Colo.	20	13	-	4
Detroit, Mich.	334	191	12	8	Salt Lake City, Utah	56	35	4	5
Evansville, Ind.	43	27	-	1	Tucson, Ariz.	49	22	1	3
Fort Wayne, Ind.	44	31	1	3	PACIFIC	1,590	982	40	34
Gary, Ind.	31	12	2	5	Berkeley, Calif.	11	10	-	-
Grand Rapids, Mich.	50	32	1	3	Fresno, Calif.	49	31	1	-
Indianapolis, Ind.	170	111	12	5	Glendale, Calif.	22	16	-	-
Madison, Wis.	50	31	1	5	Honolulu, Hawaii	57	30	3	2
Milwaukee, Wis.	129	73	11	1	Long Beach, Calif.	105	62	1	1
Peoria, Ill.	44	29	6	1	Los Angeles, Calif.	525	335	14	8
Rockford, Ill.	39	23	1	2	Oakland, Calif.	68	43	3	5
South Bend, Ind.	53	26	5	2	Pasadena, Calif.	27	19	-	-
Toledo, Ohio	102	62	4	3	Portland, Oreg.	119	76	4	1
Youngstown, Ohio	64	42	2	1	Sacramento, Calif.	74	43	2	2
WEST NORTH CENTRAL	796	493	36	32	San Diego, Calif.	98	58	-	1
Des Moines, Iowa	62	44	1	2	San Francisco, Calif.	182	103	7	3
Duluth, Minn.	23	19	-	4	San Jose, Calif.	42	24	-	1
Kansas City, Kans.	36	16	2	1	Seattle, Wash.	136	85	1	2
Kansas City, Mo.	123	82	4	-	Spokane, Wash.	42	23	4	3
Lincoln, Nebr.	27	18	-	2	Tacoma, Wash.	33	24	-	5
Minneapolis, Minn.	104	70	3	3	Total	12,515	7,321	433	407
Omaha, Nebr.	92	53	1	4	Expected Number	12,314	6,997	545	389
St. Louis, Mo.	213	113	21	9	Cumulative Total (includes reported corrections for previous weeks)	331,612	196,631	12,111	14,606
St. Paul, Minn.	71	49	1	1					
Wichita, Kans.	45	29	3	6					

†Delayed report for week ending June 16, 1973

\*Estimate based on average percent of divisional total

SURVEILLANCE SUMMARY  
MEASLES – United States, First 24 Weeks 1973

A total of 21,242 cases of measles were reported in the first 24 weeks of 1973, a 10% decrease in the number of cases reported for the comparable period in 1972 (Figure 1). Regionally, only New England experienced an increase in the number of cases reported this year over that reported for the same period last year. In the first 24 weeks of 1973, the New England and East North Central areas reported 78% of all measles cases in the United States, while representing only 26% of the population under 18 years of age. By state, the largest percentage increases in reported cases were noted in Massachusetts, Virginia, Idaho, and Oregon.

Incidence rates (per 100,000 population under 18 years of age) for the first 24 weeks of 1973 were highest in New Hampshire (324.0), Massachusetts (199.9), Rhode Island (184.0), Connecticut (166.4), and Michigan (119.5) (Figure 2). No cases were reported in Nevada and South Dakota.

(Reported by the Field Services Branch, Epidemiology Program, and the Immunization Branch, State and Community Services Division, CDC.)

Figure 1  
REPORTED CASES OF MEASLES, BY 4-WEEK PERIODS  
UNITED STATES – 1969-1973

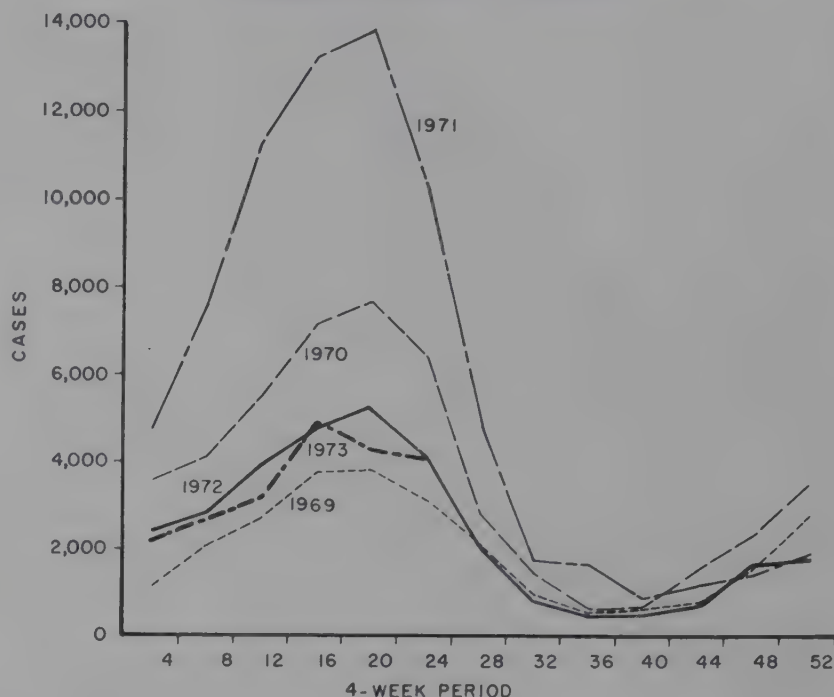
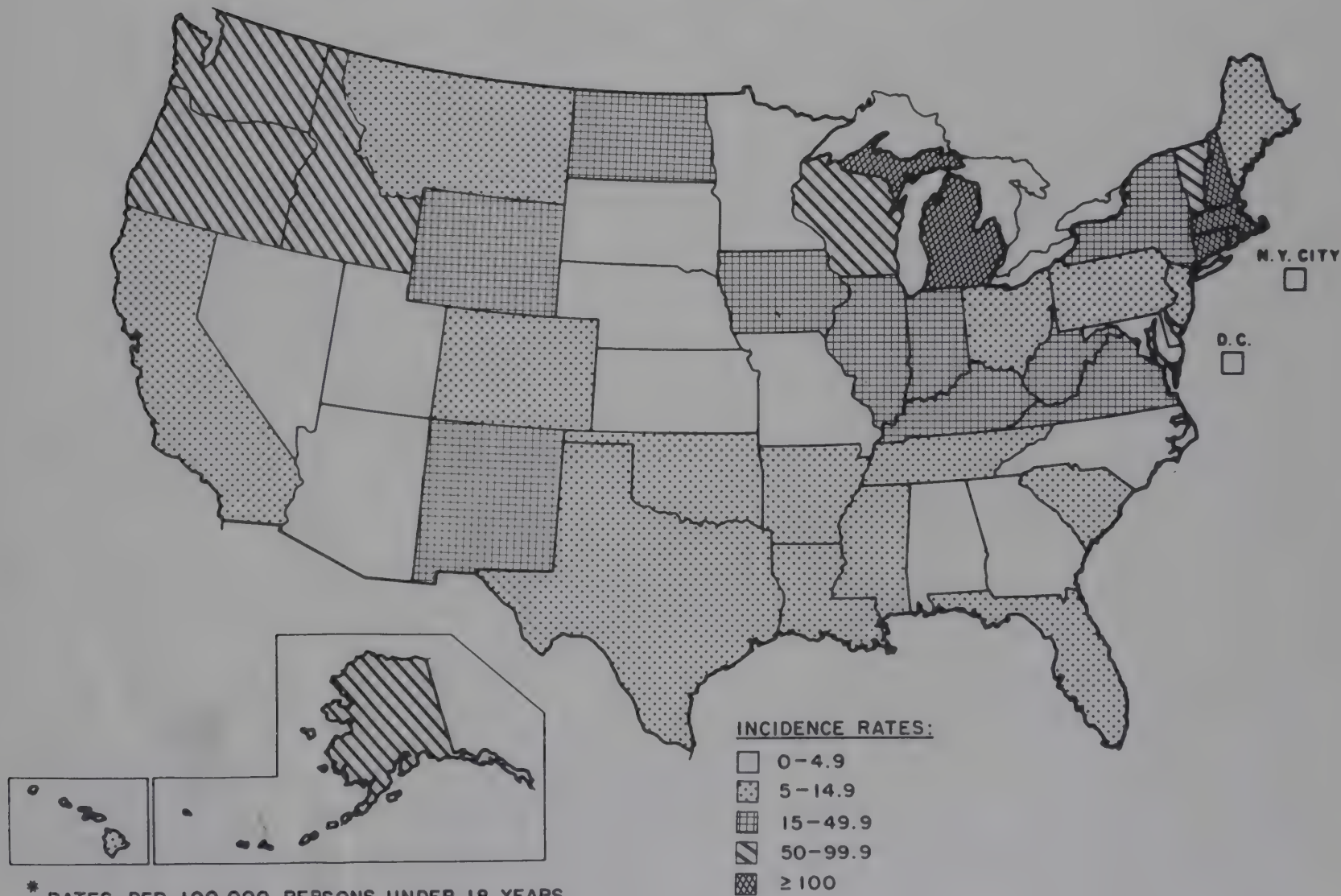


Figure 2  
INCIDENCE RATES\* OF REPORTED MEASLES CASES, BY STATE  
UNITED STATES – FIRST 24 WEEKS, 1973



\* RATES PER 100,000 PERSONS UNDER 18 YEARS

## HUMAN AND ANIMAL PLAGUE — United States

In 1970, a record number of 13 human bubonic plague cases associated with rural exposure were reported in the United States; 2 were detected in 1971, and 1 in 1972 (1). None had been reported as of June 1, 1973. Nevertheless, plague activity among wild rodent populations has remained high in those states where human cases most often occurred in the past — Arizona, California, New Mexico, and Colorado. In 1973, epizootic plague among wild rodents has been reported from 3 widely separated counties in California; Siskiyou, Tulare, and Riverside. An epizootic among wood rats at Lava Beds National Monument, Siskiyou County, detected in March, forced temporary closure of visitor facilities until vector control measures could be implemented by California State officials. Another epizootic among Gunnison's prairie dogs near Shiprock, San Juan County, New Mexico, has required vector control operations on 5,000 acres in order to protect the resident Navajo population. This situation is directly related to epizootics among prairie dogs in southwestern Colorado in 1971-1972 which required emergency vector control on the Southern Ute Indian Reservation, La-Plata County, and at Curecanti National Recreation Area, Gunnison County, Colorado.

Plague epizootics among prairie dogs have been occurring since 1963 in contiguous portions of northeastern Arizona, northwestern New Mexico, southwestern Colorado, and southeastern Utah, a region characterized ecologically as the Navajonian Biome. Since 1963, 12 prairie dog-associated human cases have occurred in the region, most of them on the Navajo Indian Reservation.

The potential problem in southwestern Colorado has been amplified by a great increase in prairie dogs on the western slope of the Rocky Mountains in the past few years,

particularly in the area of Cortez, Durango, and the Mesa Verde National Monument. In Cortez, Montezuma County, Colorado, prairie dogs within the city limits outnumber humans. Local and State officials are planning preventive vector control activities against fleas and the reduction of the prairie dog population.

(Reported by Keith F. Murray, Senior Vector Control Specialist, Bureau of Vector Control, and James Chin, M.D., State Epidemiologist, California State Department of Public Health; Ted Davis, Colorado State Department of Public Health; New Mexico Health and Social Services Department; and the Plague Section, Fort Collins Laboratories, Ecological Investigations Program, CDC.)

## Editorial Note

Human and animal plague in this country has been controlled to the extent that it is now primarily a rural, wilderness area problem and only rarely creates the threat to large urban centers that it did in the early part of this century. However, because it is sporadic and uncommon, human plague is easily overlooked or mistakenly diagnosed (2). Since it is readily treatable with appropriate antibiotics (3,4), a recognition of the current status of wild animal plague and the consequent potential for human exposure should provide a basis for suspecting and appropriately handling sporadic cases.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to:

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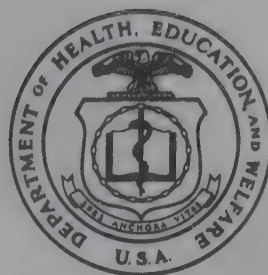
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# Morbidity and Mortality



Vol. 22, No. 26

WEEKLY  
REPORTFor  
Week Ending  
June 30, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

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## EPIDEMIOLOGIC NOTES AND REPORTS

## CONTENTS

## SHIGELLOSIS ON A CARIBBEAN CRUISE SHIP

Between June 23 and 30, an outbreak of acute gastroenteritis occurred on the cruise ship *Skyward* in the Caribbean. Approximately 90% of the 655 passengers and 35% of 299 crew were affected. The ship was on a 1-week tour with stops at Haiti, Puerto Rico, St. Thomas, and Nassau. Because of the outbreak, the ship by-passed Nassau on June 29 and arrived at Miami at 4:30 AM on June 30.

A total of 586 cases occurred among the passengers beginning on Saturday, June 23 (Figure 1). Explosive watery diarrhea was the dominant symptom, accompanied by abdominal cramps and chills, headache, and nausea (Table 1). Documented fever of 100°-102°F was not unusual, and in 1 case was 104°F. Vomiting was relatively infrequent. Symptoms generally lasted 3-5 days. In Miami, 3 of the passengers were hospitalized for short periods; the others were released to proceed home or to other destinations.

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Isolates from stool cultures obtained from 9 early cases and processed in public health laboratories in San Juan, Puerto Rico, and St. Thomas, Virgin Islands, were identified as *Shigella flexneri* type 6. Antibiotic sensitivity studies showed these isolates to be highly sensitive to tetracycline, ampicillin, sulfonamide, and chloramphenicol.

Before the passengers disembarked, they and the crew were questioned as to food and water consumption. Preliminary analysis of attack rates by food and water exposure yielded the following: no single food item could be found to account for all illnesses; however, 2 shrimp dishes that had

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	26th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 26 WEEKS		
	June 30, 1973	July 1, 1972		1973	1972	MEDIAN 1968-1972
Acute enteritis .....	98	68	68	1,118	1,004	933
Brucellosis .....	9	4	6	87	78	91
Chickenpox .....	2,667	1,791	---	139,115	106,681	---
Diphtheria .....	2	1	2	94	52	84
Encephalitis, primary:						
Arthropod-borne and unspecified .....	40	13	21	552	423	488
Encephalitis, post-infectious .....	7	7	10	154	149	201
Hepatitis, serum (Hepatitis B) .....	97	173	161	3,893	4,709	3,567
Hepatitis, infectious (Hepatitis A) .....	896	1,023	926	25,533	28,236	27,850
Malaria .....	6	7	52	120	585	1,315
Measles (rubeola) .....	343	595	663	22,191	24,835	24,835
Meningococcal infections, total .....	43	27	31	862	818	1,541
Civilian .....	41	27	28	841	785	1,387
Military .....	2	—	3	21	33	163
Mumps .....	1,232	957	1,265	50,069	51,734	67,802
Rubella (German measles) .....	334	341	534	24,754	19,132	39,958
Tetanus .....	2	3	3	40	54	54
Tuberculosis, new active .....	634	663	---	16,036	16,622	---
Tularemia .....	6	8	6	56	57	60
Typhoid fever .....	14	9	9	379	157	141
Typhus, tick-borne (Rky. Mt. spotted fever) ..	33	23	17	248	165	132
Venereal Diseases:						
Gonorrhea .....	16,603	14,686	---	389,663	346,000	---
Syphilis, primary and secondary .....	488	476	---	13,189	12,019	---
Rabies in animals .....	60	91	72	1,866	2,265	1,902

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax: .....	1	Poliomyelitis, total: .....	2
Botulism: .....	13	Paralytic: .....	2
Congenital rubella syndrome: Mo.-1 .....	15	Psittacosis: Pa.-1 .....	10
Leprosy: .....	50	Rabies in man: .....	—
Leptospirosis: Del.-1 .....	14	Trichinosis: Hawaii-1 .....	42
Plague: .....	—	Typhus, murine: Tex.-1 .....	17

## SHIGELLOSIS — Continued

Table 1  
Distribution of Symptoms of Passengers and Crew  
of the *Skyward*

Symptom	Passengers	Crew
Diarrhea	98%	84%
Loose	91%	71%
Watery	86%	70%
Tenesmus	31%	25%
Mucus	19%	12%
Blood	6%	8%
Cramps	85%	37%
Headache	66%	39%
Nausea	59%	22%
Vomiting	27%	17%
Muscle aches	55%	26%
Chills	54%	25%
Fever	47%	24%

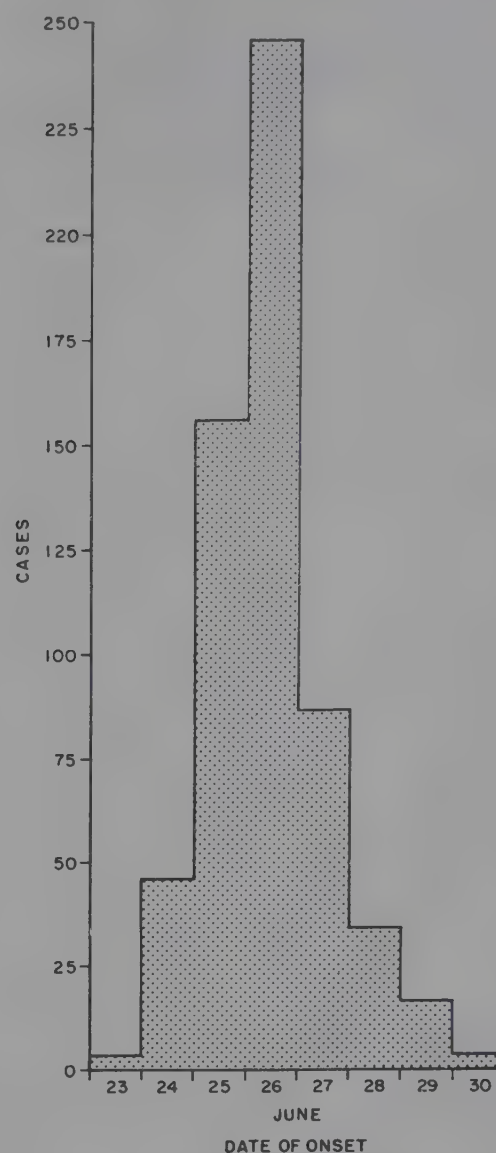
been served on ice on Saturday, June 23, and Monday, June 25, showed a statistically significant association with the occurrence of illness. Analysis of exposure to water indicated that there was significantly greater risk of illness for passengers who either drank more than 2 glasses of water per day or more than 3 beverages with ice per day. There was no apparent association between the risk of illness and the location of passengers' quarters on the ship; there were passengers from many different parts of the ship among the first 30-40 to become ill.

Six samples of the ship's water studied in the Puerto Rico laboratory were found contaminated with fecal coliforms ranging from 13 to 49 organisms per 100 ml. Investigation of the ship's kitchen and its water system has been in progress since Saturday, June 30.

One day before the end of the cruise all passengers were started on oral tetracycline, and on departure from Miami they were given a supply of tetracycline to take for 6 days. They were also advised to consult their family physician if they had further questions or symptoms. A telephone number at CDC was provided for passengers or their physicians to call for the most current information and advice. CDC informed all state epidemiologists of these findings by telegraph.

The cruise scheduled for the week of June 30–July 7 was cancelled. The next cruise will sail as scheduled on July 7. (Reported by Ragnar Johannessen, Master, M/S *Skyward*, Norwegian-Caribbean Lines; Mrs. Maria Dolores Gonzalez de

Figure 1  
SHIGELLOSIS OUTBREAK ON THE CRUISE SHIP "SKYWARD"  
IN THE CARIBBEAN, JUNE 23-30, 1973\*



\*Passengers only.

Vazquez, Supervisor, Department of Bacteriology, and Mrs. Mary Ramirez, Supervisor, Department of Sanitary Bacteriology, Institute of Laboratories, Puerto Rico Department of Health; Ferdinand A. Nicholson, Director, Bureau of Public Health Laboratories, Virgin Islands Department of Health; Milton S. Saslaw, M.D., Director, Joel L. Nitzkin, M.D., Chief, Office of Consumer Protection, Boone Carey, Jr., Engineer, and Harry S. Workman, Sanitarian, Dade County Department of Public Health; San Juan Tropical Disease Laboratories, Ecological Investigations Program, CDC; Quarantine Branch and Bacterial Diseases Branch, Epidemiology Program, CDC.)

## TYPE A BOTULISM — Idaho, Oregon

On June 16, 1973, a 32-year-old woman from Ontario, Oregon, in her 8th month of pregnancy, became ill with severe nausea and vomiting. The next day, she had weakness, blurred vision, a dry mouth, difficulty in speaking, and a nasal voice and was admitted to a local hospital for observation. On June 18, she experienced difficulty in breathing and paralysis of several cranial nerves and was transferred to a hospital in Boise, Idaho. Upon arrival, she had a respiratory arrest but was successfully resuscitated. Lumbar puncture was normal, and a Tensilon test was negative.

On June 17, the patient's 70-year-old father felt tired and dizzy. The next day, he had the same symptoms and signs as his daughter and was admitted to a hospital in Nyssa, Oregon. On June 19, he was transferred to the Boise, Idaho, hospital. The simultaneous appearance of these 2 cases suggested to physicians in Boise the diagnosis of botulism.

On June 19, trivalent ABE antitoxin was administered to both patients. Mouse neutralization studies demonstrated the presence of type A botulinal toxin in the daughter's pre-

(Continued on page 223)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JUNE 30, 1973 AND JULY 1, 1972 (26th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHtheria		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
	1973	1973	1973	1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES .....	98	9	2,667	2	94	40	13	7	97	896	1,023
NEW ENGLAND .....	12	-	685	-	3	1	-	1	4	62	81
Maine *	-	-	4	-	-	-	-	-	-	-	6
New Hampshire *	-	-	7	-	-	-	-	-	-	7	7
Vermont .....	-	-	8	-	-	-	-	-	-	3	9
Massachusetts .....	-	-	214	-	1	-	-	-	-	25	47
Rhode Island .....	12	-	46	-	2	-	-	-	3	11	2
Connecticut .....	-	-	406	-	-	1	-	1	1	16	10
MIDDLE ATLANTIC .....	5	-	179	-	-	1	4	2	33	125	164
Upstate New York .....	4	-	8	-	-	1	1	-	6	53	52
New York City .....	-	-	169	-	-	-	-	-	7	24	55
New Jersey *	-	-	NN	-	-	-	3	-	9	27	57
Pennsylvania .....	1	-	2	-	-	-	-	2	11	21	-
EAST NORTH CENTRAL .....	9	-	1,236	-	-	9	5	1	22	120	148
Ohio .....	3	-	61	-	-	2	2	-	6	29	26
Indiana .....	3	-	59	-	-	-	-	-	-	5	7
Illinois .....	-	-	-	-	-	-	2	1	10	35	49
Michigan .....	3	-	700	-	-	6	1	-	6	48	57
Wisconsin .....	-	-	416	-	-	1	-	-	-	3	9
WEST NORTH CENTRAL .....	-	1	57	1	8	-	-	-	5	40	42
Minnesota .....	-	1	1	-	-	-	-	-	3	4	6
Iowa .....	-	-	16	-	-	-	-	-	-	-	3
Missouri .....	-	-	14	1	1	-	-	-	1	22	16
North Dakota .....	-	-	14	-	-	-	-	-	-	1	7
South Dakota .....	-	-	-	-	7	-	-	-	-	1	1
Nebraska .....	-	-	2	-	-	-	-	-	1	3	1
Kansas .....	-	-	10	-	-	-	-	-	-	9	8
SOUTH ATLANTIC .....	17	1	140	-	-	6	2	2	8	167	206
Delaware .....	-	-	6	-	-	-	-	-	-	4	5
Maryland .....	-	-	13	-	-	-	-	-	1	9	18
District of Columbia .....	3	-	16	-	-	-	-	-	-	6	-
Virginia .....	-	-	5	-	-	1	1	-	2	18	23
West Virginia .....	-	-	86	-	-	-	-	-	-	5	4
North Carolina .....	5	-	NN	-	-	3	1	-	1	22	103
South Carolina .....	1	1	14	-	-	-	-	-	-	4	5
Georgia .....	-	-	-	-	-	-	-	-	-	8	4
Florida .....	8	-	-	-	-	2	-	2	4	91	44
EAST SOUTH CENTRAL .....	2	1	36	-	-	3	-	-	6	60	46
Kentucky .....	-	-	14	-	-	3	-	-	-	6	12
Tennessee .....	1	1	NN	-	-	-	-	-	2	35	23
Alabama .....	1	-	22	-	-	-	-	-	3	16	5
Mississippi .....	-	-	-	-	-	-	-	-	1	3	6
WEST SOUTH CENTRAL .....	13	5	135	1	8	15	1	-	9	109	90
Arkansas *	-	-	4	-	-	-	-	-	1	5	-
Louisiana *	3	1	NN	-	-	-	1	-	3	17	26
Oklahoma .....	3	-	13	-	-	15	-	-	2	19	4
Texas .....	7	4	118	1	8	-	-	-	3	68	60
MOUNTAIN .....	1	-	55	-	2	-	-	-	4	42	49
Montana .....	-	-	20	-	-	-	-	-	-	7	3
Idaho .....	-	-	-	-	-	-	-	-	1	1	11
Wyoming .....	-	-	-	-	-	-	-	-	-	1	-
Colorado .....	-	-	28	-	-	-	-	-	2	16	11
New Mexico .....	-	-	2	-	2	-	-	-	-	12	8
Arizona *	-	-	-	-	-	-	-	-	-	1	9
Utah .....	-	-	5	-	-	-	-	-	1	3	6
Nevada .....	1	-	-	-	-	-	-	-	-	1	1
PACIFIC .....	39	1	144	-	73	5	1	1	6	171	197
Washington .....	1	-	67	-	66	-	-	-	-	22	23
Oregon .....	4	-	2	-	3	-	-	-	2	19	21
California .....	32	1	-	-	3	5	-	1	4	127	139
Alaska .....	-	-	18	-	1	-	1	-	-	-	9
Hawaii .....	2	-	57	-	-	-	-	-	-	3	5
Guam *	-	-	-	-	-	-	-	-	-	-	9
Puerto Rico .....	-	-	7	-	-	-	-	-	-	7	14
Virgin Islands .....	-	-	33	-	-	-	-	-	-	-	-

\*Delayed reports: Chickenpox: Me. 12, N.H. 42, Ark. 1, Guam 4  
Hepatitis B: N.J. delete 1, Ariz. 2  
Hepatitis A: Me. 3, Ark. 7, La. delete 1, Ariz. 29, Guam 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JUNE 30, 1973 AND JULY 1, 1972 (26th WEEK) — Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	6	120	343	22,191	24,835	43	862	818	1,232	50,069	334	24,751
NEW ENGLAND .....	1	10	98	7,185	2,832	1	36	35	129	2,446	33	3,481
Maine *	-	-	-	57	234	-	-	3	4	252	-	6
New Hampshire *	-	-	6	834	222	-	6	2	4	166	1	35
Vermont .....	-	2	2	114	120	-	2	-	-	238	-	4
Massachusetts .....	1	4	34	3,829	541	1	11	17	18	739	18	1,961
Rhode Island .....	-	-	14	594	514	-	1	10	12	272	1	20
Connecticut .....	-	4	42	1,757	1,201	1	16	3	91	779	13	85
MIDDLE ATLANTIC .....	1	17	69	2,107	847	5	120	100	215	6,457	102	4,071
Upstate New York .....	-	10	17	691	116	1	42	24	NN	NN	4	36
New York City .....	-	1	16	815	207	-	22	33	185	3,921	30	4,421
New Jersey .....	1	2	17	330	475	1	28	20	17	1,402	62	3,000
Pennsylvania .....	-	4	19	271	49	3	28	23	13	1,134	6	28
EAST NORTH CENTRAL .....	-	16	100	7,688	10,218	4	110	108	201	13,284	94	5,581
Ohio .....	-	2	8	264	224	2	46	40	16	2,540	2	655
Indiana .....	-	3	22	554	1,179	1	4	11	24	1,051	8	896
Illinois .....	-	8	51	1,835	3,784	-	23	24	35	2,241	5	888
Michigan .....	-	3	-	3,980	1,841	1	32	29	70	3,751	67	1,698
Wisconsin .....	-	-	19	1,055	3,190	-	5	4	56	3,701	12	1,444
WEST NORTH CENTRAL .....	-	4	-	419	907	3	68	63	102	4,268	10	1,170
Minnesota .....	-	1	-	18	18	1	4	14	1	76	5	210
Iowa .....	-	-	-	272	639	-	15	2	13	2,755	1	181
Missouri .....	-	1	-	47	157	-	30	20	12	535	4	249
North Dakota .....	-	1	-	52	49	-	3	-	1	63	-	274
South Dakota .....	-	-	-	-	5	1	4	2	-	13	-	22
Nebraska .....	-	-	-	3	18	1	5	9	1	94	-	139
Kansas .....	-	1	-	27	21	-	7	16	74	832	-	95
SOUTH ATLANTIC .....	1	17	12	1,003	1,978	11	142	188	125	5,846	18	1,991
Delaware .....	-	-	-	8	46	-	-	1	3	246	-	8
Maryland .....	-	-	-	2	15	-	20	32	10	568	-	9
District of Columbia .....	-	-	-	3	2	1	4	7	14	55	-	2
Virginia .....	1	5	2	396	56	4	27	42	11	598	3	613
West Virginia .....	-	-	1	178	236	-	2	6	47	2,028	5	260
North Carolina .....	-	5	-	4	28	3	30	25	NN	NN	1	197
South Carolina .....	-	1	-	52	208	-	10	18	3	337	-	78
Georgia .....	-	2	-	42	153	-	17	6	-	25	-	7
Florida .....	-	4	9	318	1,234	3	32	51	37	1,989	9	817
EAST SOUTH CENTRAL .....	-	3	6	579	990	2	83	63	160	3,827	25	1,205
Kentucky .....	-	-	1	360	498	-	31	20	44	1,166	6	374
Tennessee .....	-	-	3	162	185	-	32	24	102	1,732	12	472
Alabama .....	-	3	-	4	128	1	14	13	14	477	4	182
Mississippi .....	-	-	2	53	179	1	6	6	-	452	3	177
WEST SOUTH CENTRAL .....	-	9	4	613	1,322	3	129	102	95	3,175	7	1,370
Arkansas *	-	-	-	68	13	-	13	8	7	322	-	109
Louisiana .....	-	2	1	83	81	-	26	31	6	63	2	100
Oklahoma .....	-	1	-	50	9	3	15	6	10	369	-	165
Texas .....	-	6	3	412	1,219	-	75	57	72	2,421	5	996
MOUNTAIN .....	1	8	11	531	1,673	2	25	13	29	2,268	14	2,306
Montana .....	-	1	-	13	12	-	5	2	4	207	4	491
Idaho .....	-	-	5	232	19	1	4	3	-	110	3	32
Wyoming .....	-	-	6	67	51	-	-	1	-	418	-	5
Colorado .....	-	1	-	95	499	1	6	2	6	361	5	1,520
New Mexico .....	1	2	-	107	105	-	3	1	17	914	2	172
Arizona .....	-	4	-	16	834	-	3	1	-	140	-	17
Utah .....	-	-	-	1	153	-	2	2	2	111	-	66
Nevada .....	-	-	-	-	-	-	2	1	-	7	-	3
PACIFIC .....	2	36	43	2,066	4,068	12	149	146	176	8,398	31	3,575
Washington .....	1	3	18	967	964	-	16	11	4	1,389	17	644
Oregon .....	-	2	12	432	70	2	12	11	29	1,512	11	749
California .....	1	28	12	586	2,934	10	117	116	109	4,607	-	2,149
Alaska .....	-	2	-	65	11	-	4	5	26	663	-	9
Hawaii .....	-	1	1	16	89	-	-	3	8	227	3	24
Guam .....	-	-	-	7	4	-	-	11	-	15	-	6
Puerto Rico .....	-	-	80	1,620	514	-	4	4	11	565	-	23
Virgin Islands .....	-	-	-	-	1	-	-	2	1	17	-	2

\*Delayed reports: Measles: Me. 11, N.H. 2  
Meningococcal infections: Ark. 1  
Mumps: Me. 15

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JUNE 30, 1973 AND JULY 1, 1972 (26th WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
									GONOR- RHEA	SYPHILIS (Pri. & Sec.)		
		Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	1973	1973	Cum. 1973
UNITED STATES .....	40	634	16,036	56	14	379	33	248	16,603	488	60	1,866
NEW ENGLAND .....	2	39	580	-	-	5	-	1	455	16	-	85
Maine *	-	1	42	-	-	-	-	-	-	-	-	50
New Hampshire .....	-	2	34	-	-	-	-	-	-	-	-	27
Vermont .....	-	1	17	-	-	-	-	-	11	2	-	3
Massachusetts .....	-	26	315	-	-	5	-	1	237	10	-	4
Rhode Island .....	1	-	41	-	-	-	-	-	37	-	-	-
Connecticut .....	1	9	131	-	-	-	-	-	170	4	-	1
MIDDLE ATLANTIC .....	6	114	3,213	-	-	33	1	12	1,978	105	1	12
Upstate New York .....	-	10	549	-	-	5	1	7	394	17	1	6
New York City .....	3	58	1,228	-	-	14	-	1	1,188	65	-	-
New Jersey .....	2	15	565	-	-	6	-	1	284	21	-	-
Pennsylvania .....	1	31	871	-	-	8	-	3	112	2	-	6
EAST NORTH CENTRAL .....	4	125	2,451	2	-	18	3	4	2,195	17	5	178
Ohio .....	1	37	746	-	-	5	3	4	745	4	-	26
Indiana .....	-	8	314	-	-	-	-	-	245	3	-	44
Illinois *	2	62	739	-	-	5	-	-	352	2	2	48
Michigan .....	-	18	575	2	-	6	-	-	562	6	-	3
Wisconsin .....	1	-	77	-	-	2	-	-	291	2	3	57
WEST NORTH CENTRAL .....	5	35	631	8	4	12	5	9	849	12	24	552
Minnesota .....	-	2	79	-	-	3	-	-	186	2	6	198
Iowa .....	-	5	65	-	-	-	3	4	202	3	9	127
Missouri .....	4	17	291	8	4	7	2	5	225	6	2	46
North Dakota .....	1	2	23	-	-	-	-	-	12	-	4	95
South Dakota .....	-	2	44	-	-	1	-	-	30	1	-	32
Nebraska .....	-	1	42	-	-	1	-	-	150	-	-	3
Kansas .....	-	6	87	-	-	-	-	-	44	-	3	51
SOUTH ATLANTIC .....	5	102	3,137	6	-	222	11	126	4,180	184	4	148
Delaware .....	-	5	38	-	-	-	-	4	20	3	-	1
Maryland .....	-	11	318	-	-	4	1	4	350	16	-	7
District of Columbia .....	-	3	145	-	-	-	-	-	269	14	-	-
Virginia .....	-	13	423	1	-	1	3	26	515	59	2	49
West Virginia .....	-	4	149	-	-	2	-	-	34	-	-	16
North Carolina .....	-	12	492	1	-	4	6	54	748	17	-	1
South Carolina .....	-	8	286	-	-	3	1	19	398	20	-	1
Georgia .....	1	13	528	3	-	1	-	19	1,071	13	1	48
Florida .....	4	33	758	1	-	207	-	-	775	42	1	25
EAST SOUTH CENTRAL .....	7	57	1,446	5	1	12	4	33	1,457	41	5	314
Kentucky .....	1	10	342	1	-	2	-	-	143	11	3	168
Tennessee .....	4	23	455	3	1	6	2	20	505	16	2	110
Alabama .....	2	17	375	-	-	2	-	3	585	6	-	36
Mississippi .....	-	7	274	1	-	2	2	10	224	8	-	-
WEST SOUTH CENTRAL .....	8	47	1,581	34	2	16	6	54	2,169	42	14	380
Arkansas *	-	-	183	21	-	3	-	9	449	1	2	86
Louisiana *	3	3	261	-	2	5	-	-	428	9	1	25
Oklahoma .....	3	4	142	11	-	2	6	43	196	5	3	124
Texas .....	2	40	995	2	-	6	-	2	1,096	27	8	145
MOUNTAIN .....	-	30	525	-	1	4	2	3	636	14	-	17
Montana *	-	8	24	-	-	-	-	-	21	-	-	-
Idaho .....	-	1	23	-	-	-	-	-	3	-	-	-
Wyoming .....	-	-	11	-	1	1	-	1	7	-	-	-
Colorado .....	-	9	103	-	-	-	1	1	135	4	-	-
New Mexico .....	-	2	113	-	-	1	1	1	268	6	-	2
Arizona .....	-	9	197	-	-	2	-	-	163	2	-	15
Utah .....	-	1	18	-	-	-	-	-	15	-	-	-
Nevada .....	-	-	36	-	-	-	-	-	24	2	-	-
PACIFIC .....	3	85	2,472	1	6	57	1	6	2,684	57	7	180
Washington .....	-	13	218	-	-	4	1	3	231	4	1	2
Oregon .....	-	2	134	-	-	2	-	2	255	2	-	1
California .....	3	63	1,918	1	6	50	-	1	2,091	50	6	170
Alaska .....	-	-	54	-	-	-	-	-	50	1	-	7
Hawaii .....	-	7	148	-	-	1	-	-	57	-	-	-
Guam*	-	-	16	-	-	-	-	-	-	-	-	-
Puerto Rico .....	4	7	258	-	-	2	-	-	103	24	4	27
Virgin Islands .....	-	-	-	-	-	-	-	-	13	3	-	-

\*Delayed reports: TB: Me. delete 1, Ill. 7  
Tularemia: Ark. 6  
Typhoid: Mont. delete 1

RMSF: Ark 2  
Gonorrhea: La. delete 9, Guam 8  
Syphilis: Guam 1

## Morbidity and Mortality Weekly Report

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING JUNE 30, 1973

Week No.

26

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	635	375	24	17	SOUTH ATLANTIC	1,068	544	41	42
Boston, Mass.	195	112	11	5	Atlanta, Ga.	120	50	5	3
Bridgeport, Conn.	45	25	-	1	Baltimore, Md.	253	130	9	-
Cambridge, Mass.	18	12	-	2	Charlotte, N. C.	47	19	3	-
Fall River, Mass.	28	23	-	-	Jacksonville, Fla.	115	48	8	1
Hartford, Conn.	40	18	1	1	Miami, Fla.	106	57	1	7
Lowell, Mass.	26	15	-	1	Norfolk, Va.	64	30	4	4
Lynn, Mass.	28	17	2	-	Richmond, Va.	96	51	2	8
New Bedford, Mass.	22	15	-	1	Savannah, Ga.	38	18	2	2
New Haven, Conn.	45	23	1	1	St. Petersburg, Fla.	78	64	1	4
Providence, R. I.	55	31	3	2	Tampa, Fla.	65	33	6	5
Somerville, Mass.	8	6	-	-	Washington, D. C.	34	17	-	4
Springfield, Mass.	41	23	4	-	Wilmington, Del.	52	27	-	4
Waterbury, Conn.	29	10	1	-	EAST SOUTH CENTRAL	710	349	40	23
Worcester, Mass.	55	35	1	3	Birmingham, Ala.	128	56	9	1
MIDDLE ATLANTIC	3,087	1,898	88	105	Chattanooga, Tenn.	64	35	3	4
Albany, N. Y.	55	33	5	-	Knoxville, Tenn.	32	22	-	1
Allentown, Pa.	26	17	-	2	Louisville, Ky.	117	57	4	7
Buffalo, N. Y.	139	93	3	10	Memphis, Tenn.	162	72	17	-
Camden, N. J.	37	16	1	4	Mobile, Ala.	63	35	3	1
Elizabeth, N. J.	25	18	-	-	Montgomery, Ala.	47	21	-	3
Erie, Pa.	40	31	1	-	Nashville, Tenn.	97	51	4	6
Jersey City, N. J.	53	36	4	4	WEST SOUTH CENTRAL	1,251	628	58	30
Newark, N. J.	77	42	4	5	Austin, Tex.	33	18	1	4
New York City, N. Y. †	1,508	933	37	47	Baton Rouge, La.	43	24	2	1
Paterson, N. J.	31	20	3	3	Corpus Christi, Tex.	49	31	-	2
Philadelphia, Pa.	506	298	11	5	Dallas, Tex.	175	91	11	3
Pittsburgh, Pa.	178	93	6	11	El Paso, Tex.	44	24	3	1
Reading, Pa.	36	23	-	1	Fort Worth, Tex.	67	36	6	1
Rochester, N. Y.	113	76	4	7	Houston, Tex.	261	98	17	2
Schenectady, N. Y.	18	14	1	1	Little Rock, Ark.	64	37	2	2
Scranton, Pa.	63	41	2	2	New Orleans, La.	170	78	2	5
Syracuse, N. Y.	86	59	4	2	Oklahoma City, Okla. *	88	47	4	1
Trenton, N. J.	38	17	-	1	San Antonio, Tex.	132	69	7	4
Utica, N. Y.	24	16	1	-	Shreveport, La.	54	29	3	1
Yonkers, N. Y.	34	22	1	-	Tulsa, Okla.	71	46	-	3
EAST NORTH CENTRAL	2,384	1,374	106	68	MOUNTAIN	526	298	24	18
Akron, Ohio	68	45	6	1	Albuquerque, N. Mex.	72	34	-	6
Canton, Ohio	46	30	1	-	Colorado Springs, Colo.	27	17	2	1
Chicago, Ill.	588	310	23	17	Denver, Colo.	121	74	12	4
Cincinnati, Ohio	162	94	3	4	Las Vegas, Nev.	56	25	-	-
Cleveland, Ohio	178	92	6	7	Ogden, Utah	21	13	-	2
Columbus, Ohio	129	75	8	9	Phoenix, Ariz.	102	60	2	1
Dayton, Ohio	104	66	1	3	Pueblo, Colo.	18	13	1	3
Detroit, Mich.	330	193	13	4	Salt Lake City, Utah	51	28	4	-
Evansville, Ind.	42	31	1	-	Tucson, Ariz.	58	34	3	1
Fort Wayne, Ind.	59	33	6	3	PACIFIC	1,560	956	38	35
Gary, Ind.	28	13	1	2	Berkeley, Calif.	15	11	1	-
Grand Rapids, Mich.	35	35	3	4	Fresno, Calif.	54	35	3	3
Indianapolis, Ind.	160	95	9	5	Glendale, Calif.	17	11	1	-
Madison, Wis.	47	26	7	3	Honolulu, Hawaii	52	34	1	1
Milwaukee, Wis.	119	74	5	2	Long Beach, Calif.	104	66	2	1
Peoria, Ill.	48	29	5	-	Los Angeles, Calif.	458	266	9	2
Rockford, Ill.	32	17	-	3	Oakland, Calif.	70	46	1	2
South Bend, Ind.	43	30	2	1	Pasadena, Calif.	33	23	-	-
Toledo, Ohio	88	52	4	-	Portland, Oreg.	130	76	5	2
Youngstown, Ohio	58	34	2	-	Sacramento, Calif.	69	45	2	1
WEST NORTH CENTRAL	792	489	28	21	San Diego, Calif.	124	72	5	5
Des Moines, Iowa	72	42	1	2	San Francisco, Calif.	146	88	1	6
Duluth, Minn.	19	11	2	1	San Jose, Calif.	56	39	-	3
Kansas City, Kans.	36	21	-	2	Seattle, Wash.	141	86	4	2
Kansas City, Mo.	132	84	7	2	Spokane, Wash.	52	34	2	4
Lincoln, Nebr.	36	22	-	-	Tacoma, Wash.	39	24	1	3
Minneapolis, Minn.	99	68	5	-	Total	12,013	6,911	447	359
Omaha, Nebr.	72	40	3	1	Expected Number	12,288	6,975	547	388
St. Louis, Mo.	207	121	5	7	Cumulative Total (includes reported corrections for previous weeks)	343,383	203,365	12,555	14,953
St. Paul, Minn.	62	41	3	2					
Wichita, Kans.	57	39	2	4					

†Delayed report for week ending June 23, 1973

\*Estimate based on average percent of divisional total

## BOTULISM — Continued

treatment serum; no toxin was found in the father's serum. Despite an extensive epidemiologic investigation, no food could be incriminated.

On June 20, the daughter precipitously delivered a 3 lb 6 oz boy. The infant had no recognizable signs of botulism but initially experienced respiratory difficulty, seizures, and hyperbilirubinemia. Mouse neutralization studies on placental fluid and on the child's serum were negative for botulinal toxin. On June 23, the 70-year-old father died, and on June 29, the 32-year-old mother died—both of respiratory and infectious complications of their disease.

(Reported by Michael O'Brien, M.D., Neurologist, George B. Pfoertner, M.D., Internist, Boise, Idaho; Arthur F. Boyle, Epidemiologist, John A. Mather, M.D., State Epidemiologist, Idaho Department of Environmental Protection and Health; Mary Ellen Nelson, Public Health Nurse Supervisor, Ray Huff, R.S., and David W. Sarazin, M.D., Health Officer, Malheur County, Oregon, Health Department; Jack Wright, R.S.,

District Sanitarian, Pendleton, Oregon; John A. Googins, M.D., State Epidemiologist, Oregon State Board of Health; Ignacio Gosset, M.D., Chief, Department of Biological Products, Directorate General for Public Health Research, Mexico, currently PAHO Fellow located at CDC; and an EIS Officer.)

## Editorial Note

This is the third outbreak of botulism reported to CDC in 1973 and the first attributed to type A this year. In addition, this is the first reported instance of childbirth in a patient with confirmed botulism. The fact that the child did not develop botulism is supported by the inability of botulinal toxin to cross the placenta in rabbits within 2 hours of exposure to supralethal doses (1).

## Reference

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## TUBERCULOSIS — Maine

On November 6, 1972, a 7-year-old girl from Vassalboro, Maine, was admitted to a hospital with suspect pneumonia. After studies were completed, her diagnosis was changed to active primary tuberculosis. Household contacts, close family contacts, school personnel, and classmates were tuberculin tested. The child's maternal grandfather, a household contact, had a positive tuberculin test and x-ray findings compatible with tuberculosis. His sputum specimens were negative.

Tuberculin testing at the child's school in February 1973 revealed a 33-year-old female teacher with far advanced, active, pulmonary tuberculosis. In addition, 5 of 20 teachers were tuberculin-positive, including 2 who had converted since October 1972. Investigation also revealed 5 of 144 students with active primary disease; 13 others were tuberculin-positive. The teacher's husband, 2 children, and sister were tuberculin-positive, as was her father who had had active tuberculosis in 1941.

Except for the grandfather of the 7-year-old child, all infected persons were close contacts of the teacher. All are now on chemoprophylaxis or chemotherapy.

(Reported by Peter J. Leadley, M.D., Director, Bureau of Health, Percy C. McIntire, M.D., Medical Director, Tuberculosis Control, Maine Department of Health and Welfare; and a

*Tuberculosis Branch Public Health Advisor, CDC.*)

## Editorial Note

Tuberculosis is not a highly infectious disease, transmission occurring primarily within households and among intimate associates of active cases. The high level of infection within the teacher's family illustrates the risk for family contacts.

Although tuberculosis generally does not spread widely in the community, certain institutional situations provide the opportunity for large numbers of susceptible persons to be exposed to a common source of infection, as in the teacher's school. It is therefore recommended that employees of schools, hospitals, nursing homes, and other institutions, and particularly those persons in a position to infect children, be subjected to tuberculosis screening programs and that preventive treatment be given to those at risk of developing tuberculosis.

The teacher was likely to have been infected in 1941 when she was in close contact with her father; preventive treatment was not available at that time. If her infection had been identified at the time of her employment as a teacher years later and if she had received treatment with isoniazid, her subsequent illness and the other cases and infections resulting from it might have been prevented.

## CURRENT TRENDS

## MODIFICATIONS IN PUBLIC HEALTH MEASURES FOR INCOMING VESSELS AND AIRCRAFT

On June 27, 1973, the Quarantine Branch, Epidemiology Program, CDC, announced regulations modifying public health measures for vessels and aircraft arriving at ports under the control of the United States (1). The modifications effective July 1 were made in response to altered patterns of international travel as well as changes which have occurred in the prevalence, transmission, and therapy of almost all communicable diseases.

Before 1969, Public Health Service inspectors boarded all vessels; in 1968, they inspected a total of 38,000 vessels. Following the establishment in 1969 of radio pratique (advance radio clearance based on health and other information supplied by ships' masters), the number boarded dropped to approximately 5,000 per year. This included a 5% random sample boarding of all vessels as a means of quality control.

Effective July 1, vessels are required to report ahead to

## MODIFICATIONS – Continued

U.S. ports by radio only 1) when certain signs and symptoms of quarantinable or other communicable diseases are observed on board, 2) when there has been a death on board, or 3) when the ship is arriving from smallpox or plague infected countries. Quarantinable diseases are smallpox, cholera, plague, and yellow fever; reportable signs and symptoms are 1) temperature of 100°F or greater accompanied or followed by rash, jaundice, or glandular swelling or persisting 2 days or more and 2) diarrhea severe enough to interfere with work or normal activity. Aircraft commanders will be required to use the same criteria as ships' masters in reporting signs and symptoms of illness before arrival at airports under the control of the United States.

CDC officials estimate that the modified measures will reduce boarding of vessels for inspection to approximately 1,000 per year, which will include a 2% random sample boarding. Formerly, all ships' masters were required to complete a maritime public health declaration for submission to Public Health Service stations. According to the modified regulations, such declarations will be required only of vessels boarded, and they will be completed by the quarantine officers.

(Reported by the Quarantine Branch, Epidemiology Program, CDC.)

## Reference

1. Federal Register 38(123):16861, 27 June 1973

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to:

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ATLANTA, GEORGIA 30333

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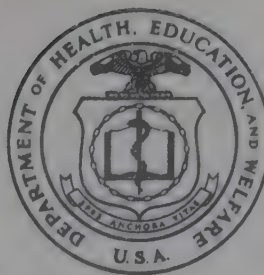
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# Morbidity and Mortality



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Week Ending  
July 7, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE

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## EPIDEMIOLOGIC NOTES AND REPORTS NOSOCOMIAL GASTROENTERITIS — Arizona

Between September 1972 and March 1973, an epidemic of nosocomial gastroenteritis occurred in the nursery of a county hospital in Arizona. Thirty-seven infants in the hospital's premature intensive care nursery and 5 infants readmitted after discharge from the term nursery were affected (Figure 1). Four diarrhea-associated deaths occurred. Nine infants had a prolonged illness compatible with "intractable diarrhea of infancy" and required total parenteral nutrition therapy.

Clinical illness was characterized by sudden onset of lethargy, abdominal distention, poor feeding, and profuse watery stools. Age at onset ranged from 3 to 44 days (median 8 days). Duration of symptoms ranged from 3 to 77 days (median 9 days).

In 5 prevalence surveys starting February 21, 64 stool specimens were obtained from 29 infants in the premature nursery and 4 readmitted patients; 23 of these infants had

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diarrhea, and 10 served as well controls. No recognized enteric pathogens were found, and no enteric viruses were detected in a subsample of 11 specimens from infants with diarrhea. However, when specimens were screened for all *Escherichia coli* serotypes using standard pools, isolation of *E. coli* 0142 showed a significant correlation with diarrheal illness (Table 1). All 3 strains of this serotype tested were found to produce filterable enterotoxin by the rabbit ileal loop assay

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	27th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 27 WEEKS		
	July 7, 1973	July 8, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	85	66	66	1,203	1,070	1,042
Brucellosis	3	3	7	90	81	98
Chickenpox	1,200	1,810	—	140,406	108,491	—
Diphtheria	—	—	2	94	52	88
Encephalitis, primary:						
Arthropod-borne and unspecified	20	12	22	570	435	500
Encephalitis, post-infectious	5	8	12	159	157	213
Hepatitis, serum (Hepatitis B)	120	114	114	4,017	4,823	3,685
Hepatitis, infectious (Hepatitis A)	669	782	782	26,230	29,018	28,841
Malaria	3	13	46	123	598	1,371
Measles (rubeola)	288	347	476	22,486	25,182	25,182
Meningococcal infections, total	20	19	27	882	837	1,568
Civilian	19	19	26	860	804	1,413
Military	1	—	3	22	33	166
Mumps	776	760	1,135	50,853	52,494	69,197
Rubella (German measles)	140	195	477	24,919	19,327	40,578
Tetanus	—	2	3	40	56	56
Tuberculosis, new active	463	515	—	16,497	17,137	—
Tularemia	—	1	6	62	58	67
Typhoid fever	5	1	7	384	158	146
Typhus, tick-borne (Rky. Mt. spotted fever)	28	24	18	279	189	151
Venereal Diseases:						
Gonorrhea	13,230	13,577	—	403,028	359,577	—
Syphilis, primary and secondary	384	339	—	13,575	12,358	—
Rabies in animals	53	51	53	1,919	2,316	1,961

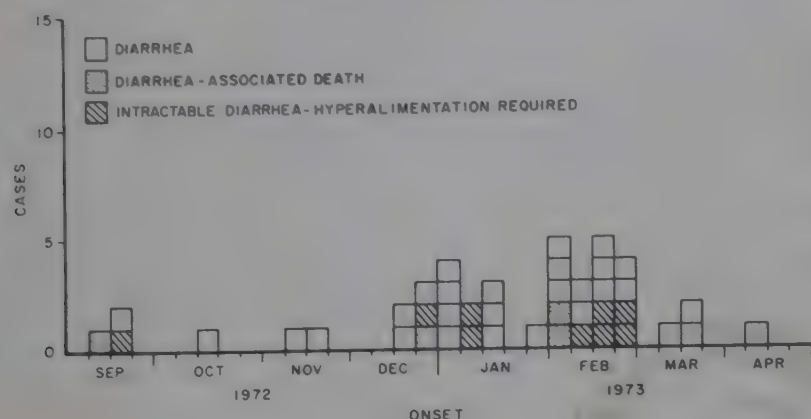
TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	2
Botulism:	13	Paralytic:	2
Congenital rubella syndrome:	15	Psittacosis:	10
Leprosy: Hawaii-4, Pa.-1, Tex.-3	58	Rabies in man:	—
Leptospirosis: *Mo.-2, Va.-1	18	Trichinosis:	42
Plague:	—	Typhus, murine: Tex.-1	18

\*Delayed report: Leptospirosis: Ark. 1

## GASTROENTERITIS — Continued

Figure 1  
GASTROENTERITIS CASES IN INFANTS, BY WEEK OF ONSET  
MARICOPA COUNTY, ARIZONA — SEPTEMBER 1972-APRIL 1973



and to be non-invasive by the Serény test. Kirby-Bauer sensitivity testing revealed that the organism was sensitive to colistin and gentamicin and resistant to neomycin and ampicillin. Blood specimens obtained from 32 ill infants were negative for *E. coli*. Despite 7 or more days of therapy with 6 mg/kg/day of parenteral gentamicin, 12 of 16 infants remained symptomatic and had persistently positive stool cultures.

Nose, throat, and rectal swabs were obtained from all personnel associated with the nurseries. None were positive for the epidemic organism. Environmental sampling revealed minimal contamination of surfaces with *E. coli* 0142; however, 3 of 20 air samples were positive for this organism. Despite very thorough handwashing with 3% hexachlorophene soap, "wipe-rinse" hand sampling revealed *E. coli* 0142 on the hands of 5 of the 29 personnel examined prior to initiation of control measures. Cultures of the hexachlorophene solution were negative. Epidemiologic analysis did not further elucidate the mode of spread of the organism.

Strict gloving procedures, oral colistin treatment of all infants in the premature unit, and closure of the unit to new admissions on March 23 were associated with termination of the outbreak. Continuing surveillance of both term and premature nurseries has revealed no new isolations of the epidemic organism since reopening of the nurseries on April 23.

(Reported by Iraj Farzaneh, M.D., Fellow in Neonatology, Montgomery Hart, M.D., Attending Pediatrician, Maricopa County Hospital; Stanford Farnsworth, M.D., Assistant County Manager for Health Services, Maricopa County Health Department; Philip Hotchkiss, D.V.M., State Epidemiologist, Arizona State Health Department; Sherwood Gorbach, M.D., Chief, Infectious Diseases, Veterans' Administration Hospital, Sepulveda, California; Samuel Formal, Ph.D., Walter Reed Army Institute of Research, Washington, D.C.; Environmental Microbiology Section, Phoenix Laboratories, Ecological Investigations Program, CDC; and 2 EIP Officers.)

## Editorial Note

It has been stated that diarrheal disease caused by enteropathogenic *E. coli* (EEC) has become milder in recent years (1), but this epidemic indicates that severe or fatal illness can still occur. Since asymptomatic carriage is not uncommon (2), isolation of EEC from an infant with diarrhea does not necessarily prove an etiologic relationship; however, a statistically significant correlation between diarrhea and isolation of EEC from stool was demonstrated in this investiga-

Table 1  
*Escherichia coli* 0142 Isolations from Infants With and Without Diarrhea

	At Least 1 Culture Positive for <i>E. coli</i> 0142	No Cultures Positive for <i>E. coli</i> 0142	Number of Patients
Infants with diarrhea (2.0 cultures/patient)	20	3*	23
Infants without diarrhea (1.7 cultures/patient)	4	6	10
Total	24	9	33

$p = .0104$  (Fisher's Exact Test)

\*Specimens obtained only during convalescence.

tion. Disease was caused by *E. coli* 0142/K86/H6, a strain not previously associated with epidemics in the United States but implicated in serious outbreaks elsewhere (3,4)

Recent evidence indicates that the ability of some strains of *E. coli* to produce diarrhea is related to their capacity to elaborate enterotoxin (5). Enterotoxin production has been associated with a transferable episome, and it is not surprising that diarrheal disease has been attributed to strains of *E. coli* other than the classic EEC serotypes. Therefore, tests to detect enterotoxin production may be as relevant clinically and epidemiologically as serotyping. Unfortunately, current methodology for detecting enterotoxin is far from ideal, and a simple reproducible inexpensive test is clearly needed.

Epidemiologic investigation of nursery outbreaks of *E. coli* diarrhea has suggested that disease is spread primarily by indirect contact via hands of personnel. Although isolation of *E. coli* from air during epidemics of diarrhea has been reported previously (6), airborne transmission is probably of secondary importance. Control measures should emphasize stool precautions, handwashing, isolation of infected and colonized infants in separate rooms, cohorting of infants and nursery personnel, and early discharge of well babies. Oral antibiotic treatment of colonized infants in epidemic situations, providing the above measures to prevent cross-infection are initiated, also seems worthwhile.

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JULY 7, 1973 AND JULY 8, 1972 (27th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
				1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES .....	85	3	1,200	-	94	20	12	5	120	669	782
NEW ENGLAND .....	3	-	252	-	3	-	-	-	5	47	63
Maine *	-	-	7	-	-	-	-	-	-	1	17
New Hampshire *	1	-	2	-	-	-	-	-	-	3	1
Vermont .....	-	-	3	-	-	-	-	-	-	-	1
Massachusetts .....	-	-	86	-	1	-	-	-	1	19	27
Rhode Island .....	2	-	45	-	2	-	-	-	1	6	6
Connecticut .....	-	-	109	-	-	-	-	-	3	18	11
MIDDLE ATLANTIC .....	7	-	77	-	-	2	5	2	9	51	55
Upstate New York .....	1	-	-	-	-	1	2	-	1	9	20
New York City .....	3	-	76	-	-	-	-	-	3	18	11
New Jersey .....	-	-	NN	-	-	-	-	-	-	-	24
Pennsylvania .....	3	-	1	-	-	1	3	2	5	24	-
EAST NORTH CENTRAL .....	8	-	468	-	-	9	4	-	12	108	141
Ohio .....	7	-	35	-	-	9	2	-	4	36	29
Indiana .....	-	-	44	-	-	-	-	-	-	9	9
Illinois .....	-	-	-	-	-	-	-	-	2	20	45
Michigan .....	-	-	85	-	-	-	2	-	5	35	41
Wisconsin .....	1	-	304	-	-	-	-	-	1	8	17
WEST NORTH CENTRAL .....	-	-	43	-	8	1	-	-	3	29	51
Minnesota .....	-	-	1	-	-	-	-	-	1	4	1
Iowa .....	-	-	9	-	-	1	-	-	1	2	1
Missouri .....	-	-	7	-	1	-	-	-	1	11	49
North Dakota .....	-	-	16	-	-	-	-	-	-	-	-
South Dakota .....	-	-	-	-	7	-	-	-	-	-	2
Nebraska .....	-	-	-	-	-	-	-	-	-	2	-
Kansas .....	-	-	10	-	-	-	-	-	-	10	8
SOUTH ATLANTIC .....	19	-	131	-	-	4	-	-	16	99	143
Delaware .....	-	-	-	-	-	-	-	-	-	-	2
Maryland *	2	-	5	-	-	-	-	-	3	4	14
District of Columbia .....	-	-	2	-	-	-	-	-	-	1	2
Virginia .....	3	-	31	-	-	1	-	-	2	9	14
West Virginia *	-	-	73	-	-	-	-	-	-	4	3
North Carolina .....	7	-	NN	-	-	1	-	-	2	18	48
South Carolina .....	1	-	19	-	-	-	-	-	1	-	8
Georgia .....	-	-	1	-	-	-	-	-	-	18	18
Florida .....	6	-	-	-	-	2	-	-	8	45	34
EAST SOUTH CENTRAL .....	10	-	23	-	-	1	2	1	11	50	37
Kentucky .....	3	-	17	-	-	-	-	-	1	12	13
Tennessee .....	4	-	NN	-	-	1	-	1	2	27	19
Alabama .....	3	-	4	-	-	-	1	-	5	3	4
Mississippi .....	-	-	2	-	-	-	1	-	3	8	1
WEST SOUTH CENTRAL .....	6	1	84	-	8	2	1	1	12	103	71
Arkansas *	-	-	5	-	-	-	-	-	-	1	3
Louisiana *	3	-	NN	-	-	-	1	-	2	10	12
Oklahoma *	1	-	11	-	-	2	-	-	3	18	12
Texas .....	2	1	68	-	8	-	-	1	7	74	44
MOUNTAIN .....	-	-	30	-	2	1	-	-	1	24	39
Montana .....	-	-	-	-	-	-	-	-	-	4	3
Idaho .....	-	-	-	-	-	-	-	-	-	1	6
Wyoming .....	-	-	-	-	-	-	-	-	-	1	1
Colorado .....	-	-	1	-	-	-	-	-	1	9	6
New Mexico .....	-	-	29	-	2	-	-	-	-	7	6
Arizona *	-	-	-	-	-	-	-	-	-	-	12
Utah .....	-	-	-	-	-	-	-	-	-	2	3
Nevada *	-	-	-	-	-	1	-	-	-	-	2
PACIFIC .....	32	2	92	-	73	-	-	1	51	158	172
Washington .....	1	-	30	-	66	-	-	-	3	18	27
Oregon .....	-	-	3	-	3	-	-	-	4	13	23
California .....	31	2	-	-	3	-	-	1	44	124	117
Alaska .....	-	-	10	-	1	-	-	-	-	1	1
Hawaii .....	-	-	49	-	-	-	-	-	-	2	4
Guam *	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	-	16	-	-	-	-	-	-	-	18
Virgin Islands .....	---	---	---	---	-	---	-	---	---	---	-

\*Delayed reports: Chickenpox: Me. 63, N.H. 28, Guam 4  
Encephalitis, primary: Md. delete 1, Okla. delete 1  
Hepatitis B: Ark. 2, Ariz. 2

Hepatitis A: Me. 4, W. Va. delete 1, Ark. 8, La. delete 4,  
Ariz. 10, Nev. 11, Guam 4

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JULY 7, 1973 AND JULY 8, 1972 (27th WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
									GONOR- RHEA	SYPHILIS (Pri. & Sec.)		
		Cumulative 1973	1973		1973	Cum. 1973	1973	Cum. 1973	1973	1973	1973	Cum. 1973
UNITED STATES .....	40	463	16,497	62	5	384	28	279	13,230	384	53	1,919
NEW ENGLAND .....	2	19	599	-	-	5	-	1	424	17	3	88
Maine *	-	4	46	-	-	-	-	-	45	-	2	52
New Hampshire .....	-	1	35	-	-	-	-	-	17	-	1	28
Vermont .....	-	-	17	-	-	-	-	-	5	-	-	3
Massachusetts .....	-	8	323	-	-	5	-	1	180	8	-	4
Rhode Island .....	1	-	41	-	-	-	-	-	35	-	-	-
Connecticut .....	1	6	137	-	-	-	-	-	142	9	-	1
MIDDLE ATLANTIC .....	6	92	3,305	-	-	33	1	13	1,714	89	2	14
Upstate New York .....	-	23	572	-	-	5	-	7	42	-	2	8
New York City .....	3	31	1,259	-	-	14	-	1	1,044	50	-	-
New Jersey .....	2	20	585	-	-	6	1	2	342	20	-	-
Pennsylvania .....	1	18	889	-	-	8	-	3	286	19	-	6
EAST NORTH CENTRAL .....	4	65	2,516	2	-	18	7	11	1,424	21	1	179
Ohio .....	1	22	768	-	-	5	4	8	380	9	-	26
Indiana .....	-	7	321	-	-	-	-	-	153	3	1	45
Illinois .....	2	7	746	-	-	5	3	3	164	-	-	48
Michigan .....	-	29	604	2	-	6	-	-	514	9	-	3
Wisconsin .....	1	-	77	-	-	2	-	-	213	-	-	57
WEST NORTH CENTRAL .....	5	29	660	8	-	12	1	10	656	1	22	574
Minnesota .....	-	1	80	-	-	3	-	-	171	1	9	207
Iowa .....	-	1	66	-	-	-	1	5	-	-	4	131
Missouri .....	4	23	314	8	-	7	-	5	212	-	3	49
North Dakota .....	1	1	24	-	-	-	-	-	12	-	3	98
South Dakota .....	-	1	45	-	-	1	-	-	63	-	-	32
Nebraska .....	-	-	42	-	-	1	-	-	42	-	-	3
Kansas .....	-	2	89	-	-	-	-	-	156	-	3	54
SOUTH ATLANTIC .....	5	83	3,220	6	-	222	13	142	3,622	110	6	154
Delaware *	-	1	39	-	-	-	-	7	56	3	-	1
Maryland .....	-	10	328	-	-	4	1	5	214	6	-	7
District of Columbia .....	-	6	151	-	-	-	-	-	278	12	-	-
Virginia .....	-	12	435	1	-	1	4	30	194	24	1	50
West Virginia .....	-	2	151	-	-	2	-	-	81	-	-	16
North Carolina .....	-	8	500	1	-	4	3	57	599	5	-	1
South Carolina .....	-	2	288	-	-	3	-	19	646	15	-	1
Georgia .....	1	15	543	3	-	1	5	24	521	5	1	49
Florida .....	4	27	785	1	-	207	-	-	1,033	40	4	29
EAST SOUTH CENTRAL .....	7	24	1,469	5	-	12	2	35	650	12	11	325
Kentucky *	1	7	348	1	-	2	-	-	134	2	9	177
Tennessee .....	4	7	462	3	-	6	-	20	399	7	1	111
Alabama .....	2	7	382	-	-	2	-	3	30	1	1	37
Mississippi .....	-	3	277	1	-	2	2	12	87	2	-	-
WEST SOUTH CENTRAL .....	8	54	1,634	40	-	16	3	57	1,927	48	3	383
Arkansas *	-	10	193	27	-	3	1	10	105	6	-	86
Louisiana *	3	2	262	-	-	5	-	-	464	15	2	27
Oklahoma .....	3	3	145	11	-	2	2	45	157	2	1	125
Texas .....	2	39	1,034	2	-	6	-	2	1,201	25	-	145
MOUNTAIN .....	-	19	544	-	1	5	1	4	451	11	-	17
Montana .....	-	2	26	-	-	-	-	-	32	-	-	-
Idaho .....	-	-	23	-	-	-	-	-	12	1	-	-
Wyoming .....	-	-	11	-	-	1	-	1	10	1	-	-
Colorado .....	-	5	108	-	1	1	-	1	119	-	-	-
New Mexico .....	-	7	120	-	-	1	1	2	102	-	-	2
Arizona *	-	3	200	-	-	2	-	-	143	2	-	15
Utah .....	-	1	19	-	-	-	-	-	17	-	-	-
Nevada .....	-	1	37	-	-	-	-	-	16	7	-	-
PACIFIC .....	3	78	2,550	1	4	61	-	6	2,362	75	5	185
Washington .....	-	6	224	-	-	4	-	3	287	1	-	2
Oregon .....	-	5	139	-	-	2	-	2	173	1	-	1
California .....	3	61	1,979	1	4	54	-	1	1,819	71	5	175
Alaska .....	-	-	54	-	-	-	-	-	44	1	-	7
Hawaii .....	-	6	154	-	-	1	-	-	39	1	-	-
Guam*	-	-	16	-	-	-	-	-	-	-	-	-
Puerto Rico .....	4	5	263	-	-	2	-	-	73	9	-	27
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: TB: Ky. delete 1, La. delete 1  
Tularemia: Ark. 6  
RMSF: Del. 3

Gonorrhea: Ariz. 135, Guam 14  
Syphilis: Me. 1, Ariz. 1

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING JULY 7, 1973

Week No.

27

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	634	389	22	20	SOUTH ATLANTIC	1,051	558	30	30
Boston, Mass.	162	83	8	2	Atlanta, Ga.	103	41	6	4
Bridgeport, Conn.	47	34	1	2	Baltimore, Md.	158	87	3	3
Cambridge, Mass.	23	16	2	3	Charlotte, N. C.	42	16	1	-
Fall River, Mass.	21	11	1	-	Jacksonville, Fla.	77	42	2	-
Hartford, Conn.	77	44	2	-	Miami, Fla.	98	57	4	2
Lowell, Mass.	23	18	-	-	Norfolk, Va.	49	29	-	4
Lynn, Mass.	19	14	-	-	Richmond, Va.	70	33	1	3
New Bedford, Mass.	32	23	-	3	Savannah, Ga.	36	24	-	2
New Haven, Conn.	46	28	3	-	St. Petersburg, Fla.	86	70	-	4
Providence, R. I.	48	30	1	6	Tampa, Fla.	76	33	4	4
Somerville, Mass.	11	9	-	1	Washington, D. C.	198	93	8	4
Springfield, Mass.	45	25	3	3	Wilmington, Del.	58	33	1	-
Waterbury, Conn.	33	18	1	-	EAST SOUTH CENTRAL	531	281	28	26
Worcester, Mass.	47	36	-	-	Birmingham, Ala.	84	35	8	1
MIDDLE ATLANTIC	3,005	1,788	110	111	Chattanooga, Tenn.	48	28	-	4
Albany, N. Y.	60	33	3	2	Knoxville, Tenn.	28	17	-	-
Allentown, Pa.	30	20	1	1	Louisville, Ky.	88	57	5	5
Buffalo, N. Y.	133	82	4	9	Memphis, Tenn.	127	65	3	7
Camden, N. J.	26	13	1	3	Mobile, Ala.	39	22	2	-
Elizabeth, N. J.	32	21	-	-	Montgomery, Ala.	31	19	3	3
Erie, Pa.	32	18	3	5	Nashville, Tenn.	86	38	7	6
Jersey City, N. J.	41	28	2	-	WEST SOUTH CENTRAL	1,087	579	73	31
Newark, N. J.	95	34	23	4	Austin, Tex.	35	16	3	2
New York City, N. Y. †	1,504	887	40	56	Baton Rouge, La.	43	26	-	3
Paterson, N. J.	48	30	4	4	Corpus Christi, Tex.	27	15	2	-
Philadelphia, Pa.	497	281	18	9	Dallas, Tex.	161	84	8	-
Pittsburgh, Pa.	157	89	7	3	El Paso, Tex.	49	26	4	6
Reading, Pa.	51	34	-	1	Fort Worth, Tex.	69	45	5	2
Rochester, N. Y.	123	91	2	9	Houston, Tex.	208	99	14	2
Schenectady, N. Y.	27	20	-	-	Little Rock, Ark.	50	26	2	4
Scranton, Pa.	36	25	-	-	New Orleans, La.	156	71	15	2
Syracuse, N. Y.	38	25	1	2	Oklahoma City, Okla. *	76	43	5	1
Trenton, N. J.	22	15	1	2	San Antonio, Tex.	111	61	9	3
Utica, N. Y.	23	19	-	-	Shreveport, La.	54	34	2	2
Yonkers, N. Y.	30	23	-	1	Tulsa, Okla.	48	33	4	4
EAST NORTH CENTRAL	2,212	1,296	73	59	MOUNTAIN	481	271	17	11
Akron, Ohio	66	42	4	-	Albuquerque, N. Mex.	51	28	1	-
Canton, Ohio	36	26	2	3	Colorado Springs, Colo.	27	12	-	1
Chicago, Ill.	647	369	24	19	Denver, Colo.	107	65	3	-
Cincinnati, Ohio	154	95	2	2	Las Vegas, Nev.	32	16	2	-
Cleveland, Ohio	127	73	3	1	Ogden, Utah	27	17	-	2
Columbus, Ohio	133	78	12	-	Phoenix, Ariz.	130	70	4	2
Dayton, Ohio	106	60	-	2	Pueblo, Colo.	12	10	-	4
Detroit, Mich.	307	168	5	5	Salt Lake City, Utah	57	29	5	-
Evansville, Ind.	47	33	-	5	Tucson, Ariz.	38	24	2	2
Fort Wayne, Ind.	31	16	4	1	PACIFIC	1,376	849	40	30
Gary, Ind.	24	10	1	2	Berkeley, Calif.	25	18	-	-
Grand Rapids, Mich.	52	30	3	5	Fresno, Calif.	43	26	3	-
Indianapolis, Ind.	92	51	2	3	Glendale, Calif.	15	12	1	1
Madison, Wis.	20	13	-	1	Honolulu, Hawaii	42	22	3	2
Milwaukee, Wis.	124	72	4	4	Long Beach, Calif.	83	46	4	1
Peoria, Ill.	32	18	2	1	Los Angeles, Calif.	417	249	9	14
Rockford, Ill.	35	21	-	4	Oakland, Calif.	74	43	2	1
South Bend, Ind.	27	18	1	1	Pasadena, Calif.	19	16	1	1
Toledo, Ohio	97	68	3	-	Portland, Oreg.	117	68	4	1
Youngstown, Ohio	55	35	1	-	Sacramento, Calif.	67	36	3	-
WEST NORTH CENTRAL	592	384	18	11	San Diego, Calif.	87	53	4	1
Des Moines, Iowa	64	43	3	-	San Francisco, Calif.	141	89	2	3
Duluth, Minn.	18	13	-	1	San Jose, Calif.	53	39	-	-
Kansas City, Kans.	28	11	5	-	Seattle, Wash.	114	80	3	-
Kansas City, Mo.	127	82	2	1	Spokane, Wash.	46	29	1	2
Lincoln, Nebr.	26	21	-	-	Tacoma, Wash.	33	23	-	3
Minneapolis, Minn.	74	51	2	1	Total	10,969	6,395	411	329
Omaha, Nebr.	54	41	-	2	Expected Number	12,262	6,954	548	388
St. Louis, Mo.	120	73	5	4	Cumulative Total (includes reported corrections for previous weeks)	354,348	209,714	12,969	15,291
St. Paul, Minn.	53	34	-	-					
Wichita, Kans.	28	15	1	2					

†Delayed report for week ended June 30, 1973

\*Estimate based on average percent of divisional total

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JULY 7, 1973 AND JULY 8, 1972 (27th WEEK) - Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	3	123	288	22,486	25,182	20	882	837	776	50,853	140	24,919
NEW ENGLAND .....	-	10	57	7,250	2,872	4	40	35	81	2,536	14	3,501
Maine *	-	-	-	63	236	-	-	3	-	261	-	68
New Hampshire *	-	-	6	842	222	-	6	2	4	170	-	353
Vermont .....	-	2	2	116	120	-	2	-	2	240	-	43
Massachusetts .....	-	4	28	3,857	551	-	11	17	12	751	10	1,974
Rhode Island .....	-	-	-	594	517	2	3	10	1	273	-	205
Connecticut .....	-	4	21	1,778	1,226	2	18	3	62	841	4	858
MIDDLE ATLANTIC .....	1	18	52	2,159	860	3	123	103	148	6,605	20	4,088
Upstate New York .....	1	11	15	706	116	1	43	25	NN	NN	4	370
New York City .....	-	1	16	831	213	2	24	34	125	4,046	12	434
New Jersey*	-	2	8	338	478	-	28	20	15	1,417	2	2,999
Pennsylvania .....	-	4	13	284	53	-	28	24	8	1,142	2	285
EAST NORTH CENTRAL .....	-	16	113	7,801	10,398	6	116	111	119	13,403	46	5,627
Ohio .....	-	2	-	264	224	6	52	42	7	2,547	4	659
Indiana .....	-	3	14	568	1,190	-	4	11	30	1,081	8	904
Illinois .....	-	8	51	1,886	3,857	-	23	25	19	2,260	3	891
Michigan .....	-	3	35	4,015	1,868	-	32	29	21	3,772	20	1,718
Wisconsin .....	-	-	13	1,068	3,259	-	5	4	42	3,743	11	1,455
WEST NORTH CENTRAL .....	-	4	7	426	910	2	70	65	34	4,402	8	1,178
Minnesota .....	-	1	-	18	18	-	4	16	-	76	4	214
Iowa .....	-	-	3	275	641	2	17	2	15	2,770	2	183
Missouri .....	-	1	-	47	158	-	30	20	6	541	-	249
North Dakota .....	-	1	4	56	49	-	3	-	1	64	2	276
South Dakota .....	-	-	-	-	5	-	4	2	-	13	-	22
Nebraska .....	-	-	-	3	18	-	5	9	8	102	-	139
Kansas .....	-	1	-	27	21	-	7	16	4	836	-	95
SOUTH ATLANTIC .....	1	18	15	1,018	1,997	3	145	191	112	5,958	17	2,008
Delaware .....	-	-	-	8	47	-	-	1	3	249	-	8
Maryland .....	-	-	-	2	15	-	20	33	10	578	-	9
District of Columbia .....	1	1	-	3	2	-	4	7	-	55	-	2
Virginia .....	-	5	7	403	57	-	27	43	43	641	2	615
West Virginia .....	-	-	3	181	243	-	2	6	30	2,058	-	260
North Carolina .....	-	5	-	4	28	1	31	25	NN	NN	1	198
South Carolina .....	-	1	2	54	208	-	10	18	1	338	2	80
Georgia .....	-	2	-	42	153	-	17	6	-	25	2	9
Florida .....	-	4	3	321	1,244	2	34	52	25	2,014	10	827
EAST SOUTH CENTRAL .....	-	3	3	582	996	1	84	67	114	3,941	8	1,213
Kentucky .....	-	-	1	361	502	-	31	20	42	1,208	1	375
Tennessee .....	-	-	-	162	186	1	33	26	69	1,801	1	473
Alabama .....	-	3	1	5	128	-	14	13	3	480	-	182
Mississippi .....	-	-	1	54	180	-	6	8	-	452	6	183
WEST SOUTH CENTRAL .....	-	9	4	616	1,349	-	129	104	45	3,219	7	1,377
Arkansas*	-	-	-	68	13	-	13	9	4	325	-	109
Louisiana .....	-	2	-	83	82	-	26	31	-	63	-	100
Oklahoma*	-	1	1	50	9	-	15	6	11	380	-	165
Texas .....	-	6	3	415	1,245	-	75	58	30	2,451	7	1,003
MOUNTAIN .....	-	8	11	542	1,688	1	26	13	24	2,292	6	2,312
Montana .....	-	1	-	13	12	1	6	2	7	214	2	493
Idaho .....	-	-	4	236	19	-	4	3	-	110	-	32
Wyoming .....	-	-	5	72	51	-	-	1	-	418	-	5
Colorado .....	-	1	-	95	501	-	6	2	7	368	3	1,523
New Mexico .....	-	2	2	109	105	-	3	1	10	924	1	173
Arizona .....	-	4	-	16	847	-	3	1	-	140	-	17
Utah .....	-	-	-	1	153	-	2	2	-	111	-	66
Nevada .....	-	-	-	-	-	-	2	1	-	7	-	3
PACIFIC .....	1	37	26	2,092	4,112	-	149	148	99	8,497	14	3,615
Washington .....	-	3	5	972	964	-	16	11	2	1,391	3	647
Oregon .....	-	2	8	440	98	-	12	12	19	1,531	4	753
California*	1	29	13	599	2,948	-	117	117	69	4,676	6	2,181
Alaska .....	-	2	-	65	11	-	4	5	3	666	-	9
Hawaii .....	-	1	-	16	91	-	-	3	6	233	1	25
Guam*	-	-	-	9	4	-	-	11	-	15	-	7
Puerto Rico .....	-	-	25	1,645	522	-	4	4	22	587	1	24
Virgin Islands .....	---	-	---	-	1	---	-	2	---	17	---	2

\*Delayed reports: Measles: Me. 6, N.H. 2, Okla. delete 1, Guam 2  
Mumps: Me. 9, Ark. delete 1  
Rubella: N.H. 2, N.J. delete 3, Calif. 26, Guam 1

## SURVEILLANCE SUMMARY

*VIBRIO PARAHAEMOLYTICUS* GASTROENTERITIS — United States, 1969-1972

Thirteen common-source gastroenteritis outbreaks attributed to *Vibrio parahaemolyticus* were reported to CDC from Atlantic, Pacific, and Gulf Coast states and Hawaii in 1969-1972 (Table 2). Eight of the outbreaks, in which vibrios were isolated from patients' stool specimens, foods, or both, were classified as laboratory-confirmed. The other 5, in which vibrios were isolated from environments where suspect foods had been prepared, were classified as unconfirmed. In these outbreaks neither patients' stool specimens nor samples of suspect food were available for laboratory study. Maryland, which reported the first laboratory-confirmed outbreaks in 1971, accounted for 6 of the total, while 7 other states reported 1 each. All outbreaks occurred between June and October, and all were attributed to the consumption of contaminated seafood.

Approximately 1,200 persons were ill in all 13 outbreaks. Attack rates ranged from 24% to 88% (median 51%). Most cases were in adults, and no patterns of unusual susceptibility by age group or sex were noted. There was no evidence of secondary spread among family members of cases in any of the outbreaks. Incubation periods for individual cases ranged from 4 to 96 hours; median incubation periods for outbreaks ranged between 15 and 24 hours.

Diarrhea, the dominant symptom, was reported by 80%-100% of persons in all outbreaks. It was generally described as explosive and watery; no bloody or mucoid stools were noted. Abdominal cramps, nausea, and vomiting also occurred frequently. Headache was reported less often, while fever with or without chills was recorded in approximately 1/4 of the cases.

Duration of illness ranged from several hours to more than 10 days in individual cases, with a median of 72 hours. In several outbreaks a small percentage of ill persons were hospitalized, but no severe complications or deaths were reported.

Among the 8 laboratory-confirmed outbreaks, 8 dif-

ferent serotypes of *V. parahaemolyticus* were isolated from patients; in 3 instances, 2 or more different serotypes were isolated from patients within the same outbreak. Most gave a positive Kanagawa hemolysin test result, a trait characteristic of pathogenic strains of the organisms (1). Nineteen different serotypes were isolated from environmental and food samples; these serotypes rarely corresponded with those isolated from patients' stool specimens in the same outbreak, and all gave negative Kanagawa hemolysin tests.

Crab, shrimp, lobster, and oysters were incriminated as vehicles of infection on 1 or more occasions (Table 2). The incriminated food was eaten raw in 2 instances and cooked in 11. In both outbreaks involving raw seafood, inadequate refrigeration was held responsible. Among those involving cooked seafood, 2 were attributed to inadequate cooking times and temperatures followed by inadequate refrigerations, and the remaining 9 were attributed to cross-contamination between raw products and cooked products.

(Reported by Morris Fishbein, Division of Microbiology, Food and Drug Administration; and the Bacterial Diseases Branch, Epidemiology Program, CDC.)

## Editorial Note

The recognition of *V. parahaemolyticus* as a cause of summertime foodborne disease outbreaks in many coastal states involving a variety of seafood products correlates well with the ecology of this organism in the United States (2). Critical to the documentation of such outbreaks has been the recent widespread use of thiosulfate citrate bile sucrose agar (TCBS), an excellent selective media for *V. parahaemolyticus*, by public health laboratories in this country. Persons conducting field investigations in which *V. parahaemolyticus* is suspect should use either Cary-Blair or Stuart's transport media for stool specimens and not the commonly employed buffered glycerol saline, which has been found inhibitory to *V. parahaemolyticus*.

In addition to the nonspecific gastroenteritis syndrome

Table 2  
Epidemiologic Features of 13 *Vibrio parahaemolyticus* Gastroenteritis Outbreaks  
United States — 1969-1972

Date	State	Vehicle	Persons Exposed	Number Ill	Attack Rate (Percent)
Confirmed Outbreaks					
August 1971	Maryland	steamed crab	559	320*	58
August 1971	Maryland	steamed crab	21	15	71
August 1971	Maryland	steamed crab	47	24	51
September 1971	Maryland	processed crab	100	24	24
July 1972	Maryland	steamed crab	26	20	77
August 1972	Massachusetts	processed lobster	36	31	86
August 1972	Louisiana	boiled shrimp	1,200	612*	51
October 1972	New Jersey	cooked crab and shrimp	15	12	60
Unconfirmed Outbreaks					
August 1969	Washington	roasted oysters	57	21	37
July-Sept. 1971	Texas	raw oysters	59	52	88
August 1971	Maryland	steamed crab	NA	43	NA
June 1972	Hawaii	raw crab	77	31	40
August 1972	Florida	steamed crab	NA	6	NA

\*Estimated number of cases based on investigation of representative sample

NA — Information not obtained

## GASTROENTERITIS — Continued

usually noted, occasional cases of dysentery-like illness with bloody and/or mucoid stools have been reported (3, 4).

In all outbreaks, stool isolates and food or environmental isolates differed with respect to serotype and Kanagawa test reactions; similar results have also been generally noted among hundreds of outbreaks reported in Japan. To date, these interesting laboratory observations have not been fully explained (5).

The primary involvement of cooked seafood in the U.S. outbreaks contrasts with the reported primary role of raw seafood in Japan. Outbreaks caused by either raw or cooked seafood should be preventable through the application of appropriate hygienic, cooking, and refrigeration practices.

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INTERNATIONAL NOTES  
QUARANTINE MEASURES

The following changes should be made in the "Supplement — Vaccination Certificate Requirements for International Travel," MMWR, Vol. 22, No. 17:

## Pakistan

Cholera — Delete the note and insert: Cholera: A certificate is also required from travelers arriving from:

Africa: Angola

Asia: Bangladesh, Burma, India, Indonesia, Malaysia, Philippines, Thailand.

A Certificate is also required from travelers leaving Pakistan if they have been in an infected area. Pakistan recommends vaccination.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

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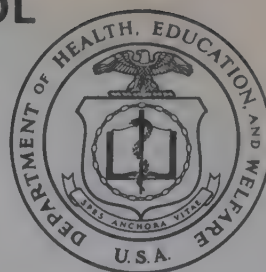
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# Morbidity and Mortality



U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE  
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## SURVEILLANCE SUMMARY CHOLERA — Worldwide, 1973

After creating a major global public health problem in 1970 and 1971, cholera invaded no new territories and caused no serious epidemics in 1972. No significant change occurred in the first 5 months of 1973. Out of a total of approximately 60 countries affected during the present pandemic, 32 countries or territories were affected in 1972 as reported to the World Health Organization, and only 15 countries have reported infection in 1973. In April of this year, an imported case of cholera was reported in the United Kingdom. The number of countries affected and the number of cases reported during the first 5 months of the years 1970 to 1973 are shown in Table 1. While the number of countries reporting cholera in Asia has not changed very much, there is a sharp fall in the number of countries reporting cholera in Africa.

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Despite this decrease in the number of countries reporting cholera and the total number of reported cases, there is no room for complacency. The difficulties of surveillance and notification of cholera cases and carriers in the absence of adequate laboratory facilities, particularly in areas with a high incidence of other non-choleraic diarrheal diseases, are well known. There have been fewer instances of the imposition of excessive restrictive measures on traffic and trade

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	28th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 28 WEEKS		
	July 14, 1973	July 15, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	122	45	119	1,325	1,115	1,115
Brucellosis	7	3	4	97	84	107
Chickenpox	1,112	1,128	— — —	141,530	109,619	— — —
Diphtheria	7	4	4	101	56	90
Encephalitis, primary:						
Arthropod-borne and unspecified	44	12	31	615	447	531
Encephalitis, post-infectious	7	8	9	166	165	222
Hepatitis, serum (Hepatitis B)	137	140	140	4,157	4,963	3,832
Hepatitis, infectious (Hepatitis A)	915	937	937	27,168	29,955	29,876
Malaria	8	3	54	131	601	1,423
Measles (rubeola)	246	325	325	22,840	25,507	25,507
Meningococcal infections, total	27	22	34	908	859	1,591
Civilian	26	22	32	885	826	1,435
Military	1	—	1	23	33	166
Mumps	845	666	957	51,711	53,160	70,154
Rubella (German measles)	162	121	431	25,081	19,448	41,009
Tetanus	4	4	3	44	60	60
Tuberculosis, new active	620	590	— — —	17,128	17,727	— — —
Tularemia	4	11	11	69	69	78
Typhoid fever	9	5	9	393	163	155
Typhus, tick-borne (Rky. Mt. spotted fever)	30	23	21	311	212	172
Venereal Diseases:						
Gonorrhea	16,750	14,632	— — —	420,033	374,209	— — —
Syphilis, primary and secondary	502	448	— — —	14,090	12,806	— — —
Rabies in animals	48	86	57	2,012	2,486	2,046

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	2
Botulism:	13	Paralytic:	2
Congenital rubella syndrome:	15	Psittacosis: *	11
Leprosy:	58	Rabies in man:	—
Leptospirosis:	18	Trichinosis:	42
Plague:	—	Typhus, murine: Tex.-4	22

\*Delayed reports: Psittacosis: Wis. 1

## CHOLERA — Continued

due to cholera, but this has not improved reporting. Limited, careful surveillance has indicated that cholera has become endemic in many newly invaded territories, particularly in coastal areas where temperature, humidity, rainfall, population density, and sanitary conditions are favorable for the infection to become entrenched. In such areas, sporadic outbreaks with some seasonal exacerbations are being recorded.

Indonesia has been reporting more cases than any other country during the last 3-year period, which may partly be due to improved surveillance and better reporting. After remaining free from cholera since September 1969, Thailand

has again reported cases in 1973.

The classical *Vibrio cholerae*, known to be the predominating causative agent of cholera in Bangladesh, caused no major outbreaks there during the last cholera season (November 1972-February 1973). In India, both the classical *V. cholerae* as well as biotype El Tor are being isolated particularly in West Bengal. In several areas of West Africa the biotype El Tor, serotype Ogawa, has been replaced by Inaba, whereas in the Arabian Peninsula the reverse has been observed.

(Reported by the World Health Organization: Weekly Epidemiological Record, Vol. 48, No. 28, July 13, 1973).

Table 1  
Global Situation of Cholera as Reported to WHO During the First 5 4-Week Periods in 1970-1973

Countries*	1970	1971	1972	1973
<b>AFRICA</b>				
Angola	—	—	189	32
Cameroon	—	1,349	264	117
Chad	—	19	5	—
Dahomey	—	1,486	173	—
French Territory of the Afars and the Issas	—	11	—	—
Ghana	—	10,407	350	138
Ivory Coast	—	565	—	—
Kenya	—	25	51	—
Liberia	—	606	826	232
Mali	—	1,613	2	—
Mauritania	—	—	64	—
Niger	—	5,634	51	—
Nigeria	—	5,489	1,474	190
Senegal	—	—	—	748
Sierra Leone	—	159	—	—
Somalia	—	85	—	—
Togo	—	297	11	—
Upper Volta	—	674	—	—
Total number of countries reporting	0	15 (28,419)**	12 (3,460)**	6 (1,457)**
<b>ASIA</b>				
Bangladesh	1,336	1,097	***	156
Brunei	24	—	—	—
Burma	399	94	25	206
Democratic Yemen	—	—	44	—
India	3,524	2,623	2,376	3,905
Indonesia	691	6,554	8,809	14,525
Israel	—	1	—	—
Malaysia				
Sabah	10	—	—	333
Sarawak	29	—	12	4
West Malaysia	1	—	113	3
Nepal	—	—	1	—
Pakistan	—	641	—	—
Philippines	42	237	613	445
Saudi Arabia	—	—	15	—
Singapore	—	—	23	1
Thailand	—	—	—	200
Viet-Nam (Republic of)	825	156	96	7
Yemen	—	—	156	—
Total number of countries reporting	8 (6,881)**	8 (11,403)**	10 (12,283)**	9 (19,785)**

\*Countries reporting cholera during the later period of these years are not included

\*\*Total number of cases

\*\*\*Number of cases not known

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JULY 14, 1973 AND JULY 15, 1972 (28th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
	1973	1973	1973	1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES .....	122	7	1,112	7	101	44	12	7	137	915	937
NEW ENGLAND .....	13	-	170	-	3	1	-	-	5	55	79
Maine *	-	-	2	-	-	-	-	-	-	1	11
New Hampshire .....	-	-	1	-	-	-	-	-	1	2	23
Vermont .....	-	-	7	-	-	-	-	-	-	2	8
Massachusetts .....	-	-	98	-	1	1	-	-	-	21	24
Rhode Island .....	13	-	28	-	2	-	-	-	4	16	4
Connecticut .....	-	-	34	-	-	-	-	-	-	13	9
MIDDLE ATLANTIC .....	2	-	19	-	-	2	-	-	14	59	99
Upstate New York .....	1	-	3	-	-	-	-	-	-	22	23
New York City .....	-	-	15	-	-	-	-	-	2	3	25
New Jersey .....	1	-	NN	-	-	-	-	-	---	---	51
Pennsylvania *	-	-	1	-	-	2	-	-	12	34	-
EAST NORTH CENTRAL .....	18	-	432	-	-	3	3	2	37	164	125
Ohio .....	6	-	76	-	-	1	1	-	6	28	36
Indiana .....	2	-	27	-	-	-	-	-	2	10	17
Illinois .....	3	-	-	-	-	-	1	2	11	60	24
Michigan .....	7	-	77	-	-	2	1	-	11	61	44
Wisconsin .....	-	-	252	-	-	-	-	-	7	5	4
WEST NORTH CENTRAL .....	2	1	129	-	8	7	-	-	3	47	28
Minnesota *	1	-	-	-	-	-	-	-	2	2	2
Iowa .....	-	1	14	-	-	1	-	-	-	1	4
Missouri .....	1	-	105	-	1	2	-	-	1	38	4
North Dakota .....	-	-	9	-	-	-	-	-	-	-	-
South Dakota .....	-	-	-	-	7	-	-	-	-	-	3
Nebraska .....	-	-	1	-	-	-	-	-	-	-	1
Kansas .....	-	-	-	-	-	4	-	-	-	6	14
SOUTH ATLANTIC .....	12	-	88	-	-	7	4	-	13	172	136
Delaware .....	-	-	5	-	-	-	-	-	-	5	-
Maryland .....	5	-	6	-	-	7	-	-	3	13	11
District of Columbia *	1	-	-	-	-	-	-	-	-	2	-
Virginia .....	-	-	4	-	-	-	-	-	1	11	29
West Virginia .....	-	-	69	-	-	-	-	-	-	2	6
North Carolina .....	4	-	NN	-	-	-	1	-	2	28	35
South Carolina *	2	-	4	-	-	-	-	-	2	11	4
Georgia .....	-	-	-	-	-	-	-	-	-	17	11
Florida .....	-	-	-	-	-	-	3	-	5	83	40
EAST SOUTH CENTRAL .....	8	2	23	-	-	2	1	-	8	64	42
Kentucky .....	5	-	7	-	-	-	-	-	-	19	15
Tennessee .....	-	2	NN	-	-	1	-	-	2	34	16
Alabama .....	3	-	15	-	-	1	-	-	5	10	10
Mississippi .....	-	-	1	-	-	-	1	-	1	1	1
WEST SOUTH CENTRAL .....	24	2	110	1	9	16	1	2	3	140	144
Arkansas *	-	-	3	-	-	-	-	-	-	6	4
Louisiana .....	3	-	NN	-	-	-	1	-	2	21	15
Oklahoma .....	11	-	10	-	-	16	-	-	1	21	7
Texas .....	10	2	97	1	9	-	-	2	-	92	118
MOUNTAIN .....	-	-	84	4	6	-	1	-	2	32	85
Montana *	-	-	31	-	-	-	-	-	-	6	3
Idaho .....	-	-	-	-	-	-	-	-	-	3	6
Wyoming .....	-	-	-	-	-	-	-	-	-	-	-
Colorado .....	-	-	16	-	-	-	-	-	1	18	24
New Mexico .....	-	-	14	4	6	-	1	-	-	3	19
Arizona *	-	-	-	-	-	-	-	-	-	-	12
Utah .....	-	-	18	-	-	-	-	-	1	2	8
Nevada *	-	-	5	-	-	-	-	-	-	-	13
PACIFIC .....	43	2	57	2	75	6	2	3	52	182	199
Washington .....	-	-	15	1	67	1	-	-	1	24	15
Oregon .....	2	-	-	-	3	-	-	-	1	29	40
California .....	40	2	-	-	3	5	2	3	50	123	129
Alaska .....	-	-	5	1	2	-	-	-	-	-	4
Hawaii .....	1	-	37	-	-	-	-	-	-	6	11
Guam .....	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	-	8	-	-	-	-	-	-	34	7
Virgin Islands .....	-	-	22	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: Pa. delete 1, Mont. 1  
 Chickenpox: Me. 1, Ark. 1, Mont. 10  
 Encephalitis, primary: S.C. 1

Hepatitis B: Minn. 2, Ariz. 1  
 Hepatitis A: Me. 3, Minn. delete 3, D.C. delete 3  
 Ark. 9, Ariz. 3, Nev. 13

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JULY 14, 1973 AND JULY 15, 1972 (28th WEEK) - Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	8	131	246	22,840	25,507	27	908	859	845	51,711	162	25,081
NEW ENGLAND .....	2	12	30	7,285	2,941	-	40	36	33	2,580	19	3,520
Maine *	-	-	-	63	237	-	-	3	4	274	-	68
New Hampshire*	-	-	4	851	224	-	6	3	2	174	-	353
Vermont .....	-	2	-	116	120	-	2	-	-	240	-	43
Massachusetts .....	2	6	18	3,875	606	-	11	17	20	771	12	1,986
Rhode Island .....	-	-	4	598	517	-	3	10	5	278	-	205
Connecticut .....	-	4	4	1,782	1,237	-	18	3	2	843	7	865
MIDDLE ATLANTIC .....	1	19	34	2,193	872	2	124	105	56	6,661	33	4,121
Upstate New York .....	-	11	15	721	123	1	44	25	NN	NN	3	373
New York City .....	-	1	4	835	217	-	24	35	31	4,077	1	435
New Jersey .....	1	3	7	345	479	-	28	20	20	1,437	29	3,028
Pennsylvania*	-	4	8	292	53	1	28	25	5	1,147	-	285
EAST NORTH CENTRAL .....	3	19	121	7,922	10,527	3	119	113	156	13,559	43	5,670
Ohio .....	1	3	14	278	225	-	52	44	41	2,588	3	662
Indiana .....	-	3	21	589	1,195	-	4	11	22	1,103	1	905
Illinois .....	2	10	35	1,921	3,903	-	23	25	16	2,276	1	892
Michigan .....	-	3	45	4,060	1,900	3	35	29	27	3,799	31	1,749
Wisconsin .....	-	-	6	1,074	3,304	-	5	4	50	3,793	7	1,462
WEST NORTH CENTRAL .....	1	5	2	428	913	1	71	65	83	4,485	7	1,185
Minnesota .....	-	1	-	18	18	-	4	16	-	76	-	214
Iowa .....	-	-	-	275	644	-	17	2	10	2,780	1	184
Missouri .....	-	1	1	48	158	-	30	20	68	609	5	254
North Dakota .....	-	1	-	56	49	-	3	-	-	64	-	276
South Dakota .....	-	-	-	-	5	-	4	2	-	13	1	23
Nebraska .....	1	1	1	4	18	1	6	9	5	107	-	139
Kansas .....	-	1	-	27	21	-	7	16	-	836	-	95
SOUTH ATLANTIC .....	-	18	13	1,134	2,028	4	149	195	130	6,087	11	2,019
Delaware .....	-	-	-	8	48	-	-	1	2	251	-	8
Maryland .....	-	-	-	2	15	-	20	33	20	598	1	10
District of Columbia *	-	1	1	4	2	-	4	8	6	60	-	2
Virginia .....	-	5	5	408	58	-	27	43	8	649	-	615
West Virginia .....	-	-	1	182	245	-	2	7	46	2,104	1	261
North Carolina .....	-	5	-	4	29	2	33	25	NN	NN	-	198
South Carolina .....	-	1	1	55	211	-	10	18	8	346	-	80
Georgia*	-	2	1	146	153	2	19	6	-	25	2	11
Florida .....	-	4	4	325	1,267	-	34	54	40	2,054	7	834
EAST SOUTH CENTRAL .....	1	4	3	585	1,004	1	85	72	142	4,083	10	1,223
Kentucky .....	-	-	-	361	507	-	31	22	11	1,219	-	375
Tennessee .....	-	-	3	165	188	-	33	28	33	1,834	8	481
Alabama .....	1	4	-	5	129	-	14	14	96	576	1	183
Mississippi .....	-	-	-	54	180	1	7	8	2	454	1	184
WEST SOUTH CENTRAL .....	-	9	2	618	1,363	11	140	107	125	3,347	13	1,390
Arkansas*	-	-	-	68	13	-	13	9	7	335	2	111
Louisiana .....	-	2	-	83	82	-	26	34	3	66	-	100
Oklahoma .....	-	1	-	50	9	7	22	6	21	401	-	165
Texas .....	-	6	2	417	1,259	4	79	58	94	2,545	11	1,014
MOUNTAIN .....	-	8	8	550	1,703	-	26	14	29	2,321	8	2,320
Montana .....	-	1	2	15	12	-	6	2	4	218	3	496
Idaho .....	-	-	1	237	19	-	4	4	-	110	-	32
Wyoming .....	-	-	1	73	51	-	-	1	-	418	-	5
Colorado .....	-	1	1	96	506	-	6	2	9	377	4	1,527
New Mexico .....	-	2	2	111	106	-	3	1	5	929	1	174
Arizona .....	-	4	-	16	856	-	3	1	-	140	-	17
Utah .....	-	-	-	1	153	-	2	2	10	121	-	66
Nevada .....	-	-	1	1	-	-	2	1	1	8	-	3
PACIFIC .....	-	37	33	2,125	4,156	5	154	152	91	8,588	18	3,633
Washington .....	-	3	15	987	965	-	16	11	4	1,395	3	650
Oregon .....	-	2	4	444	103	-	12	12	26	1,557	4	757
California .....	-	29	14	613	2,986	3	120	121	55	4,731	11	2,192
Alaska .....	-	2	-	65	11	2	6	5	6	672	-	9
Hawaii .....	-	1	-	16	91	-	-	3	-	233	-	25
Guam .....	-	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	-	25	9	4	-	-	11	-	15	-	7
Virgin Islands .....	-	-	-	1,670	524	3	7	4	21	608	2	26
					1			2		17		2

\*Delayed reports: Measles: N.H. 5, Ga. 103  
Meningococcal infections: Pa. delete 1  
Mumps: Me. 9, N.H. 2, D.C. delete 1, Ark. 3

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JULY 14, 1973 AND JULY 15, 1972 (28th WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES .....	44	620	17,128	69	9	393	30	311	16,750	502	48	2,012
NEW ENGLAND .....	2	14	613	—	—	5	—	1	473	4	1	89
Maine .....	—	1	47	—	—	—	—	—	42	—	1	53
New Hampshire * .....	—	1	36	—	—	—	—	—	20	—	—	28
Vermont .....	—	—	17	—	—	—	—	—	11	—	—	3
Massachusetts .....	—	4	327	—	—	5	—	1	207	4	—	4
Rhode Island .....	1	3	44	—	—	—	—	—	35	—	—	—
Connecticut .....	1	5	142	—	—	—	—	—	158	—	—	1
MIDDLE ATLANTIC .....	6	90	3,395	—	3	36	1	14	2,643	124	1	15
Upstate New York .....	—	26	598	—	—	5	—	7	360	12	—	8
New York City .....	3	39	1,298	—	—	14	—	1	1,242	79	—	—
New Jersey .....	2	10	595	—	3	9	1	3	295	17	—	—
Pennsylvania* .....	1	15	904	—	—	8	—	3	746	16	1	7
EAST NORTH CENTRAL .....	6	104	2,617	2	1	19	—	11	1,777	21	9	188
Ohio * .....	1	23	788	—	1	6	—	8	630	7	—	26
Indiana .....	—	15	336	—	—	—	—	—	104	1	—	45
Illinois .....	3	42	788	—	—	5	—	3	292	6	5	53
Michigan .....	1	24	628	2	—	6	—	—	625	7	—	3
Wisconsin .....	1	—	77	—	—	2	—	—	126	—	4	61
WEST NORTH CENTRAL .....	5	34	694	9	—	12	1	11	877	17	17	636
Minnesota .....	—	2	82	—	—	3	—	—	205	1	9	216
Iowa .....	—	9	75	—	—	—	—	5	118	14	1	132
Missouri .....	4	9	323	9	—	7	1	6	330	1	3	52
North Dakota .....	1	1	25	—	—	—	—	—	12	—	2	100
South Dakota* .....	—	2	47	—	—	1	—	—	49	1	—	77
Nebraska .....	—	3	45	—	—	1	—	—	93	—	—	3
Kansas .....	—	8	97	—	—	—	—	—	70	—	2	56
SOUTH ATLANTIC .....	5	134	3,355	6	—	222	19	161	4,361	186	2	156
Delaware .....	—	2	41	—	—	—	—	7	53	—	—	1
Maryland .....	—	17	345	—	—	4	—	5	390	15	—	7
District of Columbia * .....	—	8	160	—	—	—	—	—	383	18	—	—
Virginia .....	—	24	459	1	—	1	5	35	562	53	1	51
West Virginia .....	—	7	158	—	—	2	—	—	55	—	—	16
North Carolina .....	—	30	530	1	—	4	11	68	551	10	—	1
South Carolina .....	—	—	288	—	—	3	1	20	411	15	1	2
Georgia .....	1	20	563	3	—	1	2	26	1,197	17	—	49
Florida .....	4	26	811	1	—	207	—	—	759	58	—	29
EAST SOUTH CENTRAL .....	7	68	1,537	5	1	13	2	37	1,439	22	5	330
Kentucky* .....	1	10	358	1	—	2	—	—	175	7	4	181
Tennessee .....	4	16	478	3	1	7	1	21	586	10	1	112
Alabama .....	2	27	409	—	—	2	—	3	351	2	—	37
Mississippi .....	—	15	292	1	—	2	1	13	327	3	—	—
WEST SOUTH CENTRAL .....	8	85	1,719	45	1	17	7	66	2,209	47	7	390
Arkansas * .....	—	8	201	31	—	3	—	12	89	2	—	86
Louisiana* .....	3	15	277	—	—	5	—	—	363	15	4	31
Oklahoma .....	3	5	150	12	—	2	7	52	230	—	1	126
Texas .....	2	57	1,091	2	1	7	—	2	1,527	30	2	147
MOUNTAIN .....	—	15	559	1	—	5	—	4	600	8	1	18
Montana * .....	—	1	27	—	—	—	—	—	34	—	—	—
Idaho .....	—	—	23	—	—	—	—	—	18	—	—	—
Wyoming .....	—	—	11	—	—	1	—	1	6	—	—	—
Colorado .....	—	2	110	—	—	1	—	1	141	5	—	—
New Mexico .....	—	5	125	1	—	1	—	2	165	2	—	2
Arizona* .....	—	5	205	—	—	2	—	—	161	1	1	16
Utah .....	—	2	21	—	—	—	—	—	48	—	—	—
Nevada * .....	—	—	37	—	—	—	—	—	27	—	—	—
PACIFIC .....	5	76	2,639	1	3	64	—	6	2,371	73	5	190
Washington .....	1	3	227	—	1	5	—	3	200	4	—	2
Oregon .....	1	5	144	—	—	2	—	2	202	—	—	1
California .....	3	65	2,044	1	2	56	—	1	1,845	48	5	180
Alaska* .....	—	—	67	—	—	—	—	—	84	—	—	7
Hawaii .....	—	3	157	—	—	1	—	—	40	21	—	—
Guam .....	—	—	16	—	—	—	—	—	—	—	—	—
Puerto Rico .....	4	8	271	—	—	2	—	—	87	10	1	28
Virgin Islands .....	—	—	—	—	—	—	—	—	1	—	—	—

\*Delayed reports: TB: Ohio delete 3, D.C. 1, Alaska 13  
Tularemia: Ark. 3  
RMSF: Ark. 2

Gonorrhea: N.H. 10, Pa. 245, La. delete 1, Mont. 1  
Syphilis: Pa. 4, Ky. 1, Ark. delete 1, Ariz. 3, Nev. 6  
Rabies: S. Dak. 45

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING JULY 14, 1973

Week No.  
28

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area 28	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
<b>NEW ENGLAND</b> .....	677	417	24	30	<b>SOUTH ATLANTIC</b> .....	1,072	562	41	36
Boston, Mass. ....	188	102	8	13	Atlanta, Ga. ....	122	52	8	7
Bridgeport, Conn. ....	47	28	2	4	Baltimore, Md. ....	278	148	10	4
Cambridge, Mass. ....	20	15	—	2	Charlotte, N. C. ....	75	38	4	1
Fall River, Mass. ....	32	22	—	1	Jacksonville, Fla. ....	63	34	—	1
Hartford, Conn. ....	44	30	2	—	Miami, Fla. ....	103	49	4	6
Lowell, Mass. ....	19	7	—	1	Norfolk, Va. ....	58	29	3	2
Lynn, Mass. ....	23	17	—	—	Richmond, Va. ....	90	50	6	4
New Bedford, Mass. ....	16	9	2	—	Savannah, Ga. ....	33	15	—	1
New Haven, Conn. ....	65	36	5	—	St. Petersburg, Fla. ....	68	51	—	1
Providence, R. I. ....	67	45	3	4	Tampa, Fla. ....	78	36	4	7
Somerville, Mass. ....	12	6	—	1	Washington, D. C. ....	65	33	1	2
Springfield, Mass. ....	50	34	1	1	Wilmington, Del. ....	39	27	1	—
Waterbury, Conn. ....	30	21	—	—	<b>EAST SOUTH CENTRAL</b> .....	733	401	42	25
Worcester, Mass. ....	64	45	1	3	Birmingham, Ala. ....	116	71	7	3
<b>MIDDLE ATLANTIC</b> .....	3,131	1,828	107	99	Chattanooga, Tenn. ....	51	27	3	2
Albany, N. Y. ....	51	31	1	—	Knoxville, Tenn. ....	49	31	1	—
Allentown, Pa. ....	33	22	—	2	Louisville, Ky. ....	176	86	9	11
Buffalo, N. Y. ....	130	68	4	10	Memphis, Tenn. ....	151	81	13	5
Camden, N. J. ....	40	25	1	3	Mobile, Ala. ....	52	27	3	1
Elizabeth, N. J. ....	41	29	2	—	Montgomery, Ala. ....	39	23	—	1
Erie, Pa. ....	33	23	1	2	Nashville, Tenn. ....	99	55	6	2
Jersey City, N. J. ....	56	37	2	2	<b>WEST SOUTH CENTRAL</b> .....	1,232	645	62	24
Newark, N. J. ....	99	42	7	1	Austin, Tex. ....	36	16	3	1
New York City, N. Y.† .....	1,399	826	35	38	Baton Rouge, La. ....	41	24	—	2
Paterson, N. J. ....	16	3	2	1	Corpus Christi, Tex. ....	63	37	5	—
Philadelphia, Pa. ....	596	339	24	9	Dallas, Tex. ....	181	89	8	—
Pittsburgh, Pa. ....	184	99	9	11	El Paso, Tex. ....	63	37	3	6
Reading, Pa. ....	37	23	1	5	Fort Worth, Tex. ....	78	41	10	—
Rochester, N. Y. ....	101	64	3	7	Houston, Tex. ....	222	102	10	3
Schenectady, N. Y. ....	23	18	—	—	Little Rock, Ark. ....	51	25	3	2
Scranton, Pa. ....	49	34	—	2	New Orleans, La. ....	154	81	7	2
Syracuse, N. Y. ....	125	67	6	2	Oklahoma City, Okla.* .....	86	48	4	1
Trenton, N. J. ....	45	28	2	—	San Antonio, Tex. ....	135	73	9	1
Utica, N. Y. ....	23	16	1	1	Shreveport, La. ....	65	33	—	2
Yonkers, N. Y. ....	50	34	6	3	Tulsa, Okla. ....	57	39	—	4
<b>EAST NORTH CENTRAL</b> .....	2,776	1,555	153	54	<b>MOUNTAIN</b> .....	617	358	16	17
Akron, Ohio ....	77	41	2	—	Albuquerque, N. Mex. ....	41	16	4	1
Canton, Ohio ....	28	18	1	—	Colorado Springs, Colo. ....	31	21	—	2
Chicago, Ill. ....	760	398	40	22	Denver, Colo. ....	156	97	1	3
Cincinnati, Ohio ....	178	101	5	3	Las Vegas, Nev. ....	57	21	—	1
Cleveland, Ohio ....	232	116	24	2	Ogden, Utah ....	24	14	2	3
Columbus, Ohio ....	135	72	3	3	Phoenix, Ariz. ....	121	65	2	—
Dayton, Ohio ....	90	51	5	—	Pueblo, Colo. ....	28	21	—	3
Detroit, Mich. ....	371	198	32	6	Salt Lake City, Utah ....	76	51	4	3
Evansville, Ind. ....	43	21	5	2	Tucson, Ariz. ....	83	52	3	1
Fort Wayne, Ind. ....	47	25	3	2	<b>PACIFIC</b> .....	1,753	1,057	56	38
Gary, Ind. ....	39	18	2	1	Berkeley, Calif. ....	15	10	—	—
Grand Rapids, Mich. ....	50	31	—	5	Fresno, Calif. ....	52	30	6	2
Indianapolis, Ind. ....	220	127	11	1	Glendale, Calif. ....	29	21	1	2
Madison, Wis. ....	40	26	3	1	Honolulu, Hawaii ....	59	26	5	3
Milwaukee, Wis. ....	155	110	2	—	Long Beach, Calif. ....	126	74	5	1
Peoria, Ill. ....	47	28	9	—	Los Angeles, Calif. ....	521	329	11	13
Rockford, Ill. ....	38	22	2	1	Oakland, Calif. ....	79	45	2	2
South Bend, Ind. ....	31	20	1	2	Pasadena, Calif. ....	44	33	1	1
Toledo, Ohio ....	124	84	2	—	Portland, Oreg. ....	144	87	4	—
Youngstown, Ohio ....	71	48	1	3	Sacramento, Calif. ....	62	33	3	—
<b>WEST NORTH CENTRAL</b> .....	911	527	33	20	San Diego, Calif. ....	138	77	5	5
Des Moines, Iowa ....	66	37	1	—	San Francisco, Calif. ....	187	113	6	3
Duluth, Minn. ....	33	18	2	1	San Jose, Calif. ....	52	32	—	2
Kansas City, Kans. ....	38	22	3	—	Seattle, Wash. ....	136	76	4	2
Kansas City, Mo. ....	133	77	4	3	Spokane, Wash. ....	60	38	2	—
Lincoln, Nebr. ....	25	12	—	2	Tacoma, Wash. ....	49	33	1	2
Minneapolis, Minn. ....	119	81	5	—	<b>Total</b> .....	12,902	7,350	534	343
Omaha, Nebr. ....	74	45	4	—	<b>Expected Number</b> .....	12,236	6,934	549	389
St. Louis, Mo. ....	275	142	9	4	<b>Cumulative Total (includes reported corrections for previous weeks)</b> .....	367,145	217,003	13,498	15,616
St. Paul, Minn. ....	88	53	3	2					
Wichita, Kans. ....	60	40	2	8					

†Delayed report for week ending July 7, 1973

\*Estimate based on average percent of divisional total

## CURRENT TRENDS

## RESULTS OF SCREENING FOR GONORRHEA — United States, July 1972-March 1973

In the 9-month period July 1972-March 1973, gonorrhea screening programs cultured specimens from 3,117,022 females; 158,604 (5.1%) were positive. Table 2 reflects the results of such screening by type of health care facility securing the specimen. Although the positivity rates were highest (19.3%) in venereal disease clinics, only 11% of all tests were performed at such clinics. Some 89% of all tests were performed in settings other than venereal disease clinics, and in these, positivity rates ranged from 0.9% among females tested

at industrial sites to 7.9% among enrollees in manpower training programs. Some 664,110 females were tested by private physicians with a positivity rate of 2.5%. Preliminary data indicate that an additional 991,855 females were tested by all types of facilities in April and May of 1973. The overall positivity rate for all sources for this period was 4.8%.

(Reported by the Venereal Disease Branch, Bureau of State Services, CDC.)

Table 2  
Results of Gonorrhea Culture Tests on Females  
United States\* — July 1972-March 1973

Source of Test	Number Tested	Number Positive	Percent Positive	Source of Test	Number Tested	Number Positive	Percent Positive
<b>Non-Venereal Disease Clinics</b>	<b>2,760,308</b>	<b>89,619</b>	<b>3.2</b>	<b>Non-VD Clinics (Cont'd)</b>			
<b>Health Dept. Non-VD Clinic</b>	<b>695,969</b>	<b>26,652</b>	<b>3.8</b>	Private Physicians	664,110	16,557	2.5
Family Planning	457,931	16,405	3.6	Private Family Planning Groups	322,132	6,974	2.2
Prenatal, Ob-Gyn	70,281	3,336	4.7	Group Health Clinics	29,512	668	2.3
Cancer Detection	10,127	186	1.8	Student Health Centers	83,886	1,672	2.0
Combinations or Other	157,630	6,725	4.3	Manpower Training Agencies	6,175	485	7.9
<b>Public/Private Hospital</b>				Industrial Screening	6,086	56	.9
— Outpatient	542,524	22,260	4.1	Military/Dependents	33,135	427	1.3
Family Planning	59,534	1,579	2.7	Correction or Detention Centers	26,069	1,482	5.7
Prenatal, Ob-Gyn	150,646	5,557	3.7	Not Specified	98,619	2,561	2.6
Cancer Detection	8,395	117	1.4				
Combinations or Other	323,949	15,007	4.6	<b>Venereal Disease Clinics</b>	<b>356,714</b>	<b>68,985</b>	<b>19.3</b>
<b>Public/Private Hospital</b>				Gonorrhea Contacts	59,015	17,809	30.2
— Inpatient	29,759	1,295	4.4	Syphilis: Contact/Cluster/Reactor	3,346	526	15.7
Obstetric	7,119	246	3.5	Other	294,353	50,650	17.2
Gynecologic	456	33	7.2				
Combinations or Other	22,184	1,016	4.6	<b>Total (All Clinics)</b>	<b>3,117,022</b>	<b>158,604</b>	<b>5.1</b>
<b>Community Health Centers</b>	<b>222,332</b>	<b>8,530</b>	<b>3.8</b>				
Family Planning	104,473	2,865	2.7				
Prenatal, Ob-Gyn	13,746	458	3.3				
Cancer Detection	1,781	39	2.2				
Combinations or Other	102,332	5,168	5.1				

\*Includes reports from Puerto Rico and the Virgin Islands.

## EPIDEMIOLOGIC NOTES AND REPORTS

## TYPHOID FEVER ACQUIRED IN MEXICO SIMULATING APPENDICITIS — California

On April 26, 1973, a 38-year-old housewife from Santa Ana, California, was admitted to a hospital in Orange County, California, with a 4-day history of influenza-like illness. Her temperature was 104°F, and she complained of severe, cramping abdominal pain without diarrhea. On the day of admission, an appendectomy was performed; at surgery the terminal ileum was noted to be inflamed, and enlarged lymph nodes were noted in the wall of the ileum. Typhoid fever was suspected and confirmed by culture of a blood specimen. The patient responded well to ampicillin therapy.

The organism identified as *Salmonella typhi* was found to be resistant to chloramphenicol, tetracycline, sulfadiazine, and streptomycin—the drug pattern characteristic of the Mexi-

can epidemic strain. Phage typing revealed the characteristic degraded Vi(A) pattern.

On April 3, the patient and her husband had flown to Acapulco by way of Mexico City. They visited in Acapulco for 3 days and subsequently in Mexico City for 5 days. All meals were said to have been eaten at large hotels, and only bottled water was used.

(Reported by Jack B. Garlin, M.D., Public Health Medical Officer, John R. Philip, M.D., Health Officer, Orange County, California, Health Department; and S. Benson Werner, M.D., Medical Epidemiologist, Infectious Disease Section, California State Department of Health.)

## TYPE A BOTULISM — Idaho

On July 7, 1973, a 59-year-old man in Emmett, Idaho, had onset of weakness, dizziness, lethargy, sore throat, and difficulty swallowing. During the day he experienced dysarthria, chills, and progressive truncal and nuchal weakness. He was admitted to a community hospital in Emmett and then transferred to a larger hospital in Boise the next day because of deterioration in his condition.

On arrival at the hospital in Boise, the patient was weak and lethargic. Ptosis, external ophthalmoplegia, palatal paralysis, and diminished gag reflex were observed. The pupils reacted normally to light, the facial nerves were intact, and deep tendon reflexes were normal. A tensilon test was negative. While being examined in the emergency room, the patient had a respiratory arrest but was successfully resuscitated. Currently in critical condition, the patient requires the assistance of a respirator but is conscious and able to respond to commands. He was given 2 vials of trivalent (ABE) botulinal antitoxin on the day of admission to the Boise hospital. Pretreatment serum and stool specimens revealed type A botulinal toxin.

Investigation revealed that on July 6 the patient had eaten a meal of fresh corn, other vegetables, and home-canned smoked salmon. He had caught the fish in Montana 3 weeks previously. It had been soaked in a solution of brine and brown sugar for 8 hours, then smoked for 8 hours. Afterwards it was skinned, filleted, and packed in 1-qt glass jars. These jars were covered and placed in a pan of boiling water for 90 minutes, then sealed and cooled. A vacuum was created inside the jars as they cooled.

Of 15 jars prepared, 4 were given to friends who ate the salmon without ill effects, and 6 were consumed by the patient and his family in the past several weeks. The 5 remain-

ing jars were negative for botulinal toxin.

(Reported by Tom Henson, M.D., neurologist, Hugh Atcheley, M.D., physician, St. Alphonsus Hospital, Boise, Idaho; John A. Mather, M.D., Director of Preventive Medicine, Idaho State Department of Health; Robert E. Goldsworthy, U.S. Food and Drug Inspector, Seattle, Washington; Enterobacteriology Section, Bacteriology Branch, Bureau of Laboratories, CDC; and 2 EIS Officers.)

## Editorial Note

Cases of botulism traced to fish are predominantly type E, although cases of type A due to fish products have occurred, primarily in western states. Of 23 outbreaks of botulism related to a fish product reported in the United States since 1899, 5 were attributed to type A, 2 to type B, and 16 to type E. Because types A and B as well as E toxins can contaminate marine products and because plant products can be contaminated with type E, it has been recommended that patients with illness diagnosed as botulism should immediately receive trivalent (ABE) antitoxin, as in this case. (1)

Although tests on the suspect food product did not reveal the presence of toxin, it is common to find in such outbreaks that only a single jar of several prepared at the same time contains toxin. This is the 1st time that type A botulinal toxin has been identified in a stool specimen.

By coincidence, this patient was admitted to the same hospital as 2 other patients who had type A botulism in June (MMWR, Vol. 22, No. 26). No epidemiologic connection between the 2 previous cases and the current one was found despite careful investigation.

## Reference

1. Donadio JA, Gangarosa EJ, Faich GA: Diagnosis and treatment of botulism. J Infect Dis 124:108-112, 1971.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to:

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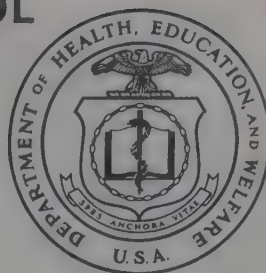
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# Morbidity and Mortality



Vol. 22, No. 29

WEEKLY  
REPORT

For  
Week Ending  
July 21, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE  
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## INTERNATIONAL NOTES

### BOTULISM TRACED TO COMMERCIAL CANNED MARINATED MUSHROOMS - Canada

On July 5, 1973, a 28-year-old woman living in Montreal, Quebec, Canada, noted excessive fatigue at the end of a day's shopping. On July 6, diplopia, dysarthria, dysphagia, respiratory impairment, and difficulty walking supervened, and she sought medical assistance. Her complaints were diagnosed as psychogenic by several physicians; she was hospitalized on July 7 when the diagnosis of botulism was considered. By the next day her respiratory insufficiency required tracheostomy and assisted ventilation. Trivalent (ABE) botulism antitoxin was administered on July 9 with equivocal results, but respirator assistance was successfully discontinued on July 10. The patient was asymptomatic except for some residual diplopia at the time of her discharge on July 24. Epidemiologic investigation revealed that on July 4,

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while alone at home, the patient had eaten from a jar of Marque Pastene Marinated Mushrooms, manufactured by Wirth's Food Products, Lawrence, Massachusetts. Although she usually ate an entire 6 1/2-oz jar at one sitting, the contents of the suspect container had tasted bad, and she had eaten only approximately 5 of the mushrooms. The remainder of the suspect jar was tested at l'Institut de Microbiologie de Montreal early in the course of the patient's hospitalization. Protection studies using monovalent botulism antitoxin in

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	29th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 29 WEEKS		
	July 21, 1973	July 22, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	174	97	120	1,500	1,212	1,212
Brucellosis	4	6	6	102	90	113
Chickenpox	1,080	1,116	---	142,634	110,735	---
Diphtheria	—	1	1	102	57	92
Encephalitis, primary:						
Arthropod-borne and unspecified	32	25	26	648	472	555
Encephalitis, post-infectious	154	202	12	177	172	234
Hepatitis, serum (Hepatitis B)	1,542	1,046	134	4,349	5,165	3,966
Hepatitis, infectious (Hepatitis A)	972	1,046	991	28,164	31,001	30,925
Malaria	7	21	37	138	622	1,497
Measles (rubeola)	26,329	25,764	329	23,261	25,764	25,764
Meningococcal infections, total	28	32	32	935	878	1,643
Civilian	26	30	30	912	843	1,474
Military	2	2	2	23	35	170
Mumps	690	671	901	52,405	53,831	70,952
Rubella (German measles)	197	185	348	25,279	19,633	41,357
Tetanus	3	3	3	48	63	63
Tuberculosis, new active	651	663	---	17,777	18,390	---
Tularemia	4	5	5	78	74	80
Typhoid fever	15	10	7	409	173	163
Typhus, tick-borne (Rky. Mt. spotted fever)	42	32	23	353	244	190
Venereal Diseases:						
Gonorrhea	18,529	16,489	---	438,560	390,698	---
Syphilis, primary and secondary	373	530	---	14,443	13,336	---
Rabies in animals	50	84	71	2,067	2,486	2,095

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	2
Botulism:	13	Paralytic:	2
Congenital rubella syndrome: Md.-1, Mo.-1.	17	Psittacosis:	11
Leprosy: *Calif.-1	57	Rabies in man:	—
Leptospirosis:	18	Trichinosis: Calif.-1, N.Y. Ups.-1	44
Plague:	—	Typhus, murine: Tex.-1	23

\*Delayed reports: Leprosy: Tex. delete 2

**BOTULISM – Continued**

mice confirmed the presence of botulinal toxin, probably type B, in the mushrooms.

On July 19 the case was reported to the Health Protection Branch, Health and Welfare, Canada, which confirmed the presence of type B botulinal toxin in the suspect jar and found the pH of the contents from the opened jar to be 6.3. The pH range of 4 apparently normal jars of this product tested by the Health Protection Branch was 4.2-4.5. The highest pH in 32 samples of 4 jars each of this product tested by the U.S. Food and Drug Administration (FDA) was 4.7. FDA determined that the product was made from fresh mushrooms to which a vinegar marinade was added before processing at 190°F for 1 hour.

On July 21, FDA announced a recall of marinated mushrooms canned by Wirth's Food Products. The recall included 7 brands (Pastene Brand Marinated Mushrooms, Marinated Mushrooms, Purveyor Brand, Carriage Trade, Wirth Brand, Pinmoney, and S. S. Pierce) and 6 different sizes (4-, 6-, 6 1/2-, 16-, and 32-oz jars of whole mushrooms and 15 1/2-oz jars of sliced mushrooms). The primary consignees were Massachusetts, New York, New Jersey, Pennsylvania, and California firms; military distributors; and Panamanian and Canadian customers. The products bore no identifying lot numbers. A similar recall in Canada involving Marque Pastene only was announced on July 19.

No other cases of neurologic disease compatible with botulism in consumers of the incriminated product have been reported to CDC or to Canadian health authorities.

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**Editorial Note**

Since February 1973, botulinal toxin has been detected in mushroom products canned in the United States on 4 separate occasions (MMWR, Vol. 22, Nos. 7, 10, 13, 14). This is the first reported case of botulism that has been related to any of these products. Heating mushrooms at 190°F for 1 hour would not be sufficient to kill type B *Clostridium botulinum* spores (1). Surviving type B spores could germinate and produce toxin under subsequent anaerobic conditions at a pH of 4.8 or greater (2).

Although over 90% of all outbreaks of botulism in the United States reported since 1899 for which the vehicle of transmission was identified were due to home-canned or home-preserved foods, cases of suspected botulism should be assumed to be associated with a contaminated commercially distributed food until investigation implicates another vehicle or the diagnosis is ruled out.

**References**

1. Perkins WE: Prevention of botulism by thermal processing. In Botulism: Proceedings of a Symposium, Cincinnati, December 1964 (PHS Pub No. 999-FP-1), edited by Lewis KH, Cassel K Jr. Cincinnati, 1964, pp 187-204
2. Schmidt CF: Spores of *C. botulinum*: Formation, resistance, germination. In Botulism: Proceedings of a Symposium, Cincinnati, December 1964 (PHS Pub No. 999-FP-1), edited by Lewis KH, Cassel K Jr. Cincinnati, 1964, p 76

**EPIDEMIOLOGIC NOTES AND REPORTS****RELAPSING FEVER – Georgia, Arizona**

In July 1973, 2 epidemiologically related cases of relapsing fever were reported to CDC from Georgia and Arizona; these cases and a subsequent investigation for additional cases are summarized below.

**Georgia:** On June 22, 1973, a 12-year-old girl from Atlanta, Georgia, became ill with chills, headache, and fever (temperature 104°F) which lasted 3 days. After the fever subsided, the girl felt completely well, but on July 4, she had a febrile episode of 2 days' duration. On July 11, she consulted a local physician; physical examination was normal, and no therapy was instituted. On July 12, her temperature rose briefly to 104°F. On July 19, she had another episode of fever and returned to her physician. Loosely coiled spirochetes were noted on a peripheral blood smear taken while she was febrile, and she was placed on tetracycline therapy.

The patient and her parents had visited several western national parks between June 17 and 21. On June 18, they had stayed in an old wooden cabin on the North Rim of the Grand Canyon. The girl and her father carried firewood into the cabin, but they noticed no ticks and gave no history of tick bites.

**Arizona:** On July 4, 1973, a 20-year-old desk clerk at North Rim Lodge, Grand Canyon National Park, Arizona, developed an acute illness characterized by headache, fever, chills, and myalgia. Diagnostic studies performed during his 4-day hospitalization at a local hospital were unrevealing, and he was discharged improved on no antibiotic therapy. A clinical relapse with fever (temperature 103.8°F) and severe prostration occurred on July 13, and the patient was admitted to another hospital. Routine studies on admission, including urinalysis, electrolytes, BUN, bilirubin, and SGOT, were considered normal. A complete blood cell count revealed a hemoglobin of 14.5 gm%, white blood cell count of 7,200, and a normal differential count. A peripheral blood smear was noted to contain numerous spirochetal organisms consistent with a diagnosis of relapsing fever. Oral tetracycline therapy was initiated with rapid clinical improvement, and the patient has subsequently remained asymptomatic.

Epidemiologic investigation on July 21, revealed that 46 of 290 employees and their family members living at the park had experienced similar illnesses in the preceding month. No

(Continued on page 247)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JULY 21, 1973 AND JULY 22, 1972 (29th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES . . . . .	174	4	1,080	-	102	32	25	11	154	972	1,046
NEW ENGLAND . . . . .	21	-	137	-	3	-	3	1	4	79	81
Maine *	-	-	1	-	-	-	-	-	-	2	5
New Hampshire *	-	-	-	-	-	-	-	-	-	11	-
Vermont . . . . .	-	-	3	-	-	-	-	-	-	3	5
Massachusetts . . . . .	1	-	78	-	1	-	3	-	1	33	46
Rhode Island . . . . .	20	-	31	-	2	-	-	-	1	12	10
Connecticut . . . . .	-	-	24	-	-	-	-	1	2	18	15
MIDDLE ATLANTIC . . . . .	4	-	52	-	-	1	-	4	42	138	94
Upstate New York . . . . .	4	-	2	-	-	-	-	4	12	62	30
New York City . . . . .	-	-	48	-	-	-	-	-	6	12	21
New Jersey . . . . .	-	-	NN	-	-	-	-	-	20	47	43
Pennsylvania . . . . .	-	-	2	-	-	1	-	-	4	17	-
EAST NORTH CENTRAL . . . . .	23	-	640	-	-	6	8	1	21	150	170
Ohio . . . . .	12	-	343	-	-	2	1	-	6	41	24
Indiana . . . . .	1	-	35	-	-	-	1	-	1	11	7
Illinois . . . . .	1	-	-	-	-	1	2	1	3	37	55
Michigan . . . . .	9	-	68	-	-	3	4	-	10	53	80
Wisconsin . . . . .	-	-	194	-	-	-	-	-	1	8	4
WEST NORTH CENTRAL . . . . .	2	-	20	-	8	1	1	-	5	30	80
Minnesota *	-	-	-	-	-	-	-	-	-	1	7
Iowa . . . . .	-	-	14	-	-	-	1	-	-	10	3
Missouri . . . . .	2	-	4	-	1	1	-	-	3	8	55
North Dakota . . . . .	-	-	2	-	-	-	-	-	-	-	-
South Dakota . . . . .	-	-	-	-	7	-	-	-	-	-	3
Nebraska . . . . .	-	-	-	-	-	-	-	-	1	1	-
Kansas . . . . .	-	-	-	-	-	-	-	-	1	10	12
SOUTH ATLANTIC . . . . .	22	-	82	-	-	7	3	-	18	174	172
Delaware . . . . .	-	-	3	-	-	-	-	-	-	-	1
Maryland . . . . .	3	-	8	-	-	-	-	-	2	11	15
District of Columbia . . . . .	3	-	4	-	-	-	-	-	-	-	2
Virginia . . . . .	7	-	6	-	-	3	-	-	3	26	17
West Virginia . . . . .	2	-	56	-	-	-	-	-	-	8	7
North Carolina . . . . .	-	-	NN	-	-	-	2	-	2	37	55
South Carolina . . . . .	2	-	4	-	-	2	1	-	-	7	10
Georgia . . . . .	-	-	1	-	-	-	-	-	-	36	20
Florida . . . . .	5	-	-	-	-	2	-	-	11	49	45
EAST SOUTH CENTRAL . . . . .	36	-	6	-	-	3	-	-	18	105	46
Kentucky . . . . .	9	-	3	-	-	-	-	-	-	41	20
Tennessee . . . . .	-	-	NN	-	-	1	-	-	4	43	19
Alabama . . . . .	20	-	3	-	-	-	-	-	9	12	5
Mississippi . . . . .	7	-	-	-	-	2	-	-	5	9	2
WEST SOUTH CENTRAL . . . . .	16	4	54	-	9	9	4	-	3	91	123
Arkansas *	-	-	1	-	-	-	-	-	-	1	6
Louisiana . . . . .	3	-	NN	-	-	1	2	-	1	9	15
Oklahoma . . . . .	8	1	5	-	-	8	1	-	2	14	14
Texas . . . . .	5	3	48	-	9	-	1	-	-	67	88
MOUNTAIN . . . . .	3	-	27	-	7	-	-	-	1	15	46
Montana . . . . .	1	-	14	-	-	-	-	-	-	3	2
Idaho . . . . .	1	-	-	-	-	-	-	-	-	5	11
Wyoming . . . . .	-	-	-	-	-	-	-	-	-	1	-
Colorado . . . . .	-	-	7	-	-	-	-	-	-	3	10
New Mexico . . . . .	1	-	6	-	6	-	-	-	1	3	9
Arizona *	-	-	-	-	1	-	-	-	-	-	10
Utah . . . . .	---	---	---	---	-	---	-	---	---	---	4
Nevada . . . . .	-	-	-	-	-	-	-	-	-	-	-
PACIFIC . . . . .	47	-	62	-	75	5	6	5	42	190	234
Washington . . . . .	5	-	38	-	67	1	2	-	1	20	25
Oregon . . . . .	-	-	-	-	3	-	-	-	5	13	29
California *	42	-	-	-	3	4	4	5	36	141	173
Alaska . . . . .	-	-	4	-	2	-	-	-	-	1	-
Hawaii . . . . .	-	-	20	-	-	-	-	-	-	15	7
Guam *	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico . . . . .	-	-	2	-	-	-	-	-	-	10	12
Virgin Islands . . . . .	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: Ark. 1  
 Brucellosis: Ark. 1  
 Chickenpox: Me. 7, N.H. 17, Guam 2  
 Diphtheria: Ariz. 1

Encephalitis, primary: Ark. 1  
 Hepatitis B: Minn. 1, Calif. 37  
 Hepatitis A: Me. 7, N.H. 2, Minn. delete 1,  
 Ark. 5, Ariz. 11

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JULY 21, 1973 AND JULY 22, 1972 (29th WEEK) — Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	7	138	268	23,261	25,764	26	935	878	690	52,405	197	25,279
NEW ENGLAND .....	—	12	27	7,313	2,978	3	44	36	51	2,635	11	3,531
Maine*	—	—	—	63	238	—	1	3	4	282	—	68
New Hampshire*	—	—	2	854	227	—	6	3	3	177	—	353
Vermont .....	—	2	1	117	120	—	2	—	1	241	—	43
Massachusetts .....	—	6	16	3,891	623	1	12	17	5	776	8	1,994
Rhode Island .....	—	—	2	600	519	—	3	10	16	294	1	206
Connecticut .....	—	4	6	1,788	1,251	2	20	3	22	865	2	867
MIDDLE ATLANTIC .....	2	21	66	2,259	889	2	126	107	131	6,792	10	4,131
Upstate New York .....	1	12	27	748	123	1	45	27	NN	NN	1	374
New York City .....	—	1	12	847	227	1	25	35	105	4,182	3	438
New Jersey .....	1	4	23	368	484	—	28	20	14	1,451	5	3,033
Pennsylvania .....	—	4	4	296	55	—	28	25	12	1,159	1	286
EAST NORTH CENTRAL .....	—	19	108	8,182	10,640	2	121	116	114	13,673	33	5,703
Ohio .....	—	3	—	278	226	1	53	46	19	2,607	4	666
Indiana .....	—	3	6	595	1,206	—	4	11	8	1,111	3	908
Illinois .....	—	10	41	1,962	3,937	1	24	25	18	2,294	4	896
Michigan *	—	3	47	4,259	1,934	—	35	30	23	3,822	15	1,764
Wisconsin .....	—	—	14	1,088	3,337	—	5	4	46	3,839	7	1,469
WEST NORTH CENTRAL .....	—	5	2	430	918	1	72	66	15	4,500	3	1,188
Minnesota .....	—	1	—	18	19	1	5	17	—	76	3	217
Iowa .....	—	—	1	276	646	—	17	2	4	2,784	—	184
Missouri .....	—	1	—	48	158	—	30	20	5	614	—	254
North Dakota .....	—	1	—	56	51	—	3	—	—	64	—	276
South Dakota .....	—	—	—	—	5	—	4	2	1	14	—	23
Nebraska .....	—	1	1	5	18	—	6	9	5	112	—	139
Kansas .....	—	1	—	27	21	—	7	16	—	836	—	95
SOUTH ATLANTIC .....	4	22	25	1,159	2,038	5	154	200	79	6,166	10	2,029
Delaware .....	—	—	—	8	48	—	—	1	—	251	—	8
Maryland .....	3	3	7	9	15	2	22	33	2	600	—	10
District of Columbia .....	—	1	1	5	2	—	4	9	9	69	—	2
Virginia .....	—	5	1	409	58	1	28	44	11	660	1	616
West Virginia .....	—	—	1	183	249	—	2	7	33	2,137	4	265
North Carolina .....	—	5	—	4	29	—	33	25	NN	NN	1	199
South Carolina .....	—	1	—	55	214	—	10	19	—	346	—	80
Georgia .....	1	3	1	147	153	—	19	6	1	26	—	11
Florida .....	—	4	14	339	1,270	2	36	56	23	2,077	4	838
EAST SOUTH CENTRAL .....	—	4	—	585	1,014	3	88	74	99	4,182	6	1,229
Kentucky .....	—	—	—	361	514	—	31	23	38	1,257	—	375
Tennessee .....	—	—	—	165	191	2	35	28	56	1,890	3	484
Alabama .....	—	4	—	5	129	1	15	15	5	581	—	183
Mississippi .....	—	—	—	54	180	—	7	8	—	454	3	187
WEST SOUTH CENTRAL .....	—	9	5	623	1,382	5	145	110	73	3,420	12	1,403
Arkansas*	—	—	1	69	13	—	13	9	3	338	—	112
Louisiana .....	—	2	—	83	82	2	28	34	—	66	—	100
Oklahoma .....	—	1	1	51	9	3	25	6	6	407	1	166
Texas .....	—	6	3	420	1,278	—	79	61	64	2,609	11	1,025
MOUNTAIN .....	—	8	11	561	1,716	1	27	15	27	2,348	10	2,330
Montana .....	—	1	—	15	12	—	6	2	2	220	3	499
Idaho .....	—	—	5	242	20	—	4	4	—	110	1	33
Wyoming .....	—	—	4	77	51	—	—	1	—	418	—	5
Colorado .....	—	1	2	98	510	1	7	3	13	390	3	1,530
New Mexico .....	—	2	—	111	108	—	3	1	12	941	3	177
Arizona .....	—	4	—	16	862	—	3	1	—	140	—	17
Utah .....	---	—	---	1	153	---	2	2	---	121	---	66
Nevada .....	—	—	—	1	—	—	2	1	—	8	—	3
PACIFIC .....	1	38	24	2,149	4,189	4	158	154	101	8,689	102	3,735
Washington .....	—	3	9	996	970	1	17	11	6	1,401	—	650
Oregon .....	—	2	3	447	108	—	12	13	34	1,591	8	765
California .....	1	30	10	623	3,006	3	123	122	56	4,787	93	2,285
Alaska .....	—	2	—	65	11	—	6	5	—	672	—	9
Hawaii .....	—	1	2	18	94	—	—	3	5	238	1	26
Guam *	—	—	—	11	4	—	—	11	—	16	—	7
Puerto Rico .....	—	—	12	1,682	527	—	7	4	7	615	—	26
Virgin Islands .....	—	—	—	—	1	—	—	2	—	17	—	2

\*Delayed reports: Measles: N.H. 1, Mich. 152, Guam 2  
Meningococcal infections: Me. 1

Mumps: Me. 4, Guam 1  
Rubella: Ark. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JULY 21, 1973 AND JULY 22, 1972 (29th WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES .....	48	651	17,777	78	15	409	42	353	18,529	373	50	2,067
NEW ENGLAND .....	2	20	631	—	—	5	—	1	563	11	—	89
Maine *	—	3	48	—	—	—	—	—	33	1	—	53
New Hampshire .....	—	—	36	—	—	—	—	—	12	—	—	28
Vermont .....	—	—	17	—	—	—	—	—	7	1	—	3
Massachusetts .....	—	10	337	—	—	5	—	1	288	5	—	4
Rhode Island .....	1	1	45	—	—	—	—	—	63	1	—	—
Connecticut .....	1	6	148	—	—	—	—	—	160	3	—	1
MIDDLE ATLANTIC .....	7	118	3,513	—	1	37	3	17	2,656	129	1	16
Upstate New York .....	1	19	617	—	1	6	2	9	396	6	—	8
New York City .....	3	33	1,331	—	—	14	—	1	1,449	83	—	—
New Jersey .....	2	27	622	—	—	9	—	3	305	23	—	—
Pennsylvania .....	1	39	943	—	—	8	1	4	506	17	1	8
EAST NORTH CENTRAL .....	6	100	2,717	2	3	22	5	16	2,546	16	3	191
Ohio .....	1	36	824	—	3	9	4	12	1,039	4	—	26
Indiana .....	—	17	353	—	—	—	—	—	244	2	—	45
Illinois .....	3	23	811	—	—	5	1	4	234	—	1	54
Michigan .....	1	24	652	2	—	6	—	—	784	10	—	3
Wisconsin .....	1	—	77	—	—	2	—	—	245	—	2	63
WEST NORTH CENTRAL .....	5	35	729	9	1	13	—	11	1,113	11	23	659
Minnesota .....	—	3	85	—	1	4	—	—	239	4	9	225
Iowa .....	—	5	80	—	—	—	—	5	133	—	3	135
Missouri .....	4	18	341	9	—	7	—	6	415	6	5	57
North Dakota .....	1	—	25	—	—	—	—	—	15	—	5	105
South Dakota .....	—	2	49	—	—	1	—	—	29	—	—	77
Nebraska .....	—	1	46	—	—	1	—	—	47	1	—	3
Kansas .....	—	6	103	—	—	—	—	—	235	—	1	57
SOUTH ATLANTIC .....	8	147	3,502	6	1	223	13	174	4,791	134	10	167
Delaware .....	—	7	48	—	—	—	—	7	117	2	1	2
Maryland .....	—	24	369	—	1	5	1	6	354	10	1	8
District of Columbia .....	—	1	161	—	—	—	—	—	413	13	—	—
Virginia .....	2	12	471	1	—	1	3	38	436	37	2	53
West Virginia *	—	4	162	—	—	2	1	1	47	1	—	17
North Carolina .....	—	23	553	1	—	4	1	69	645	6	—	1
South Carolina .....	—	28	316	—	—	3	6	26	378	22	—	2
Georgia .....	1	17	580	3	—	1	1	27	1,186	21	4	53
Florida .....	5	31	842	1	—	207	—	—	1,215	22	2	31
EAST SOUTH CENTRAL .....	7	61	1,598	5	4	17	16	53	1,186	14	5	335
Kentucky .....	1	14	372	1	—	2	—	—	145	7	2	183
Tennessee .....	4	21	499	3	1	8	4	25	563	5	3	115
Alabama .....	2	15	424	—	—	2	6	9	97	2	—	37
Mississippi .....	—	11	303	1	3	5	6	19	381	—	—	—
WEST SOUTH CENTRAL .....	8	59	1,778	54	1	18	3	69	2,460	49	6	400
Arkansas *	—	9	210	36	—	3	—	12	142	3	—	86
Louisiana *	3	7	284	—	1	6	—	—	693	11	1	32
Oklahoma .....	3	6	156	16	—	2	3	55	296	4	2	128
Texas *	2	37	1,128	2	—	7	—	2	1,329	31	3	154
MOUNTAIN .....	—	22	581	1	—	6	2	6	532	2	—	18
Montana .....	—	1	28	—	—	—	—	—	29	—	—	—
Idaho .....	—	—	23	—	—	—	1	1	81	—	—	—
Wyoming .....	—	—	11	—	—	1	—	1	—	—	—	—
Colorado .....	—	4	114	—	—	1	—	1	204	2	—	—
New Mexico .....	—	3	128	1	—	1	1	3	25	—	—	2
Arizona *	—	14	219	—	—	3	—	—	174	—	—	16
Utah .....	—	—	21	—	—	—	—	—	—	—	—	—
Nevada .....	—	—	37	—	—	—	—	—	19	—	—	—
PACIFIC .....	5	89	2,728	1	4	68	—	6	2,682	7	2	192
Washington .....	1	4	231	—	1	6	—	3	270	4	—	2
Oregon .....	1	5	149	—	—	2	—	2	263	2	—	1
California .....	3	75	2,119	1	3	59	—	1	2,059	—	2	182
Alaska .....	—	—	67	—	—	—	—	—	33	—	—	7
Hawaii *	—	5	162	—	—	1	—	—	57	1	—	—
Guam *	—	—	27	—	—	—	—	—	—	—	—	—
Puerto Rico .....	4	6	277	—	—	2	—	—	97	11	1	29
Virgin Islands .....	—	—	—	—	—	—	—	—	5	2	—	—

\*Delayed reports: TB: Me. delete 2, Guam 11  
Tularemia: Ark. 5  
Typhoid: Ariz. 1

Gonorrhea: La. delete 2, Guam 6  
Syphilis: Hawaii delete 20  
Rabies: W. Va. 1, Tex. 4

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING JULY 21, 1973

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	686	419	17	34	SOUTH ATLANTIC	1,363	717	49	49
Boston, Mass.	226	136	8	8	Atlanta, Ga.	123	58	3	8
Bridgeport, Conn.	34	25	—	3	Baltimore, Md.	217	119	7	5
Cambridge, Mass.	32	20	1	5	Charlotte, N. C.	42	15	6	—
Fall River, Mass.	19	12	—	—	Jacksonville, Fla.	112	62	4	2
Hartford, Conn.	64	39	—	2	Miami, Fla.	112	57	3	3
Lowell, Mass.	27	9	—	3	Norfolk, Va.	68	33	3	8
Lynn, Mass.	19	11	—	1	Richmond, Va.	101	55	1	4
New Bedford, Mass.	20	13	—	—	Savannah, Ga.	29	19	2	1
New Haven, Conn.	54	28	4	—	St. Petersburg, Fla.	108	81	2	3
Providence, R. I.	56	33	1	8	Tampa, Fla.	68	37	3	4
Somerville, Mass.	10	8	—	—	Washington, D. C.	335	157	13	8
Springfield, Mass.	44	30	2	3	Wilmington, Del.	48	24	2	3
Waterbury, Conn.	21	17	—	—	EAST SOUTH CENTRAL	716	407	32	27
Worcester, Mass.	60	38	1	1	Birmingham, Ala.	129	67	7	3
MIDDLE ATLANTIC	3,460	2,094	112	134	Chattanooga, Tenn.	64	38	3	3
Albany, N. Y.	60	32	4	1	Knoxville, Tenn.	43	28	1	2
Allentown, Pa.	33	20	—	1	Louisville, Ky.	112	62	5	10
Buffalo, N. Y.	135	80	3	6	Memphis, Tenn.	160	89	12	—
Camden, N. J.	57	32	3	—	Mobile, Ala.	61	36	2	1
Elizabeth, N. J.	34	18	—	—	Montgomery, Ala.	29	17	1	2
Erie, Pa.	35	26	3	4	Nashville, Tenn.	118	70	1	6
Jersey City, N. J.	46	32	3	3	WEST SOUTH CENTRAL	1,253	641	60	45
Newark, N. J.	81	42	4	4	Austin, Tex.	39	23	3	3
New York City, N. Y. †	1,785	1,115	50	79	Baton Rouge, La.	34	12	—	—
Paterson, N. J.	32	19	1	—	Corpus Christi, Tex.	19	7	3	—
Philadelphia, Pa.	595	342	16	5	Dallas, Tex.	158	71	5	3
Pittsburgh, Pa.	162	83	13	8	El Paso, Tex.	50	31	5	5
Reading, Pa.	33	24	1	3	Fort Worth, Tex.	96	44	2	1
Rochester, N. Y.	124	82	4	5	Houston, Tex.	296	136	16	9
Schenectady, N. Y.	20	8	3	2	Little Rock, Ark.	62	37	5	6
Scranton, Pa.	60	40	—	4	New Orleans, La.	159	93	6	6
Syracuse, N. Y.	62	36	3	1	Oklahoma City, Okla. *	88	48	4	2
Trenton, N. J.	42	23	1	1	San Antonio, Tex.	142	71	5	2
Utica, N. Y.	30	19	—	1	Shreveport, La.	49	26	2	3
Yonkers, N. Y.	34	21	—	6	Tulsa, Okla.	61	42	4	5
EAST NORTH CENTRAL	2,559	1,430	107	60	MOUNTAIN	582	329	35	13
Akron, Ohio	66	41	1	—	Albuquerque, N. Mex.	55	26	2	5
Canton, Ohio	45	26	2	1	Colorado Springs, Colo.	36	24	1	—
Chicago, Ill.	652	342	25	10	Denver, Colo.	132	70	17	1
Cincinnati, Ohio	170	112	2	2	Las Vegas, Nev.	62	27	2	—
Cleveland, Ohio	179	104	3	4	Ogden, Utah	17	12	—	1
Columbus, Ohio	132	69	12	4	Phoenix, Ariz.	124	75	8	3
Dayton, Ohio	92	55	4	2	Pueblo, Colo.	30	20	—	2
Detroit, Mich.	390	201	19	17	Salt Lake City, Utah	52	36	4	—
Evansville, Ind.	42	29	2	4	Tucson, Ariz.	74	39	1	1
Fort Wayne, Ind.	45	27	2	3	PACIFIC	1,661	1,037	50	36
Gary, Ind.	34	20	2	3	Berkeley, Calif.	21	15	—	—
Grand Rapids, Mich.	48	30	—	—	Fresno, Calif.	65	38	2	1
Indianapolis, Ind.	138	71	6	2	Glendale, Calif.	31	23	1	1
Madison, Wis.	91	45	4	1	Honolulu, Hawaii	47	21	2	2
Milwaukee, Wis.	120	70	6	2	Long Beach, Calif.	93	59	1	4
Peoria, Ill.	55	36	6	—	Los Angeles, Calif.	566	367	14	9
Rockford, Ill.	35	18	3	2	Oakland, Calif.	97	61	4	1
South Bend, Ind.	60	40	4	1	Pasadena, Calif.	33	17	—	—
Toledo, Ohio	113	65	2	2	Portland, Oreg.	144	93	11	2
Youngstown, Ohio	52	29	2	—	Sacramento, Calif.	70	38	3	—
WEST NORTH CENTRAL	873	531	40	34	San Diego, Calif.	107	69	2	2
Des Moines, Iowa	67	38	3	2	San Francisco, Calif.	153	92	7	7
Duluth, Minn.	29	19	—	4	San Jose, Calif.	58	31	—	1
Kansas City, Kans.	29	16	3	2	Seattle, Wash.	103	65	2	2
Kansas City, Mo.	123	81	5	2	Spokane, Wash.	38	27	1	3
Lincoln, Nebr.	33	23	—	1	Tacoma, Wash.	35	21	—	1
Minneapolis, Minn.	131	68	11	1	Total	13,153	7,605	502	432
Omaha, Nebr.	83	42	5	1	Expected Number	12,210	6,913	550	390
St. Louis, Mo.	242	146	9	8	Cumulative Total (includes reported corrections for previous weeks)	380,702	224,913	14,016	16,089
St. Paul, Minn.	65	45	2	3					
Wichita, Kans.	71	53	2	10					

†Delayed report for week ending July 14, 1973

\*Estimate based on average percent of divisional total

RELAPSING FEVER — Continued

apparent temporal clustering was noted, with sporadic cases occurring throughout the period June 15–July 18, 1973. Mouse inoculation studies on blood specimens from 10 individuals with most recent symptoms revealed all 10 to be infected with *Borrelia* organisms. Their symptoms are shown in Table 1. The rustic cabins where the patients resided were scattered throughout the North Rim Park area and included standard and deluxe cabins, mens' and womens' employee dormitories, and the ranger housing area. A preliminary survey of South Rim employees revealed no cases of a clinically similar illness.

Tourists visiting the area are being warned about the current outbreak, and vector control measures are being initiated.

(Reported by Thomas Luckey, M.D., private physician, Atlanta; John E. McCroan, Ph.D., State Epidemiologist, Georgia Department of Human Resources; Dean Abbott, Sanitarian, Thomas O. Newell, M.A., Communicable Disease Investigator, and William Thomas, M.D., Director, Coconino County Health Department, Flagstaff, Arizona; Philip M. Hotchkiss, D.V.M., State Epidemiologist, Arizona State Department of Health; William Orr, Chief Ranger, Alan Steckler, Ph.D., Consultant, National Park Service, North Rim, Grand Canyon National Park; Phoenix, Arizona, Laboratories, Fort Collins, Colorado, Laboratories, Ecological Investigations Program, the Bacterial Immunology Section, Bacteriology Branch, Bureau of Laboratories, and the Bacterial Diseases Branch, Bureau of Epidemiology, CDC.)

Editorial Note

Endemic tickborne relapsing fever has been recorded in Arizona (1,2) and 12 other western states. Although it is usually a sporadic endemic disease, large outbreaks can occur. The last large outbreak was in 1968 in a group of Boy Scouts using old wooden cabins in Spokane County, Washington (3).

The disease is transmitted by several species of ticks of the genus *Ornithodoros* (*O. hermsi*, *O. parkeri*, and *O. turicata*) and produced by spirochetes of the genus *Borrelia* with similar names (*B. hermsi*, *B. parkeri*, and *B. turicata*). The *Ornitho-*

Table 1  
Symptoms of 10 Patients with Laboratory-Confirmed Relapsing Fever  
Grand Canyon National Park — June-July 1973

Symptom	Number with Symptom
Headache	8
Muscle pain	8
Weakness	8
Nausea	8
Feverish feeling	7
Loss of appetite	7
Stiff neck	6
Shaking chills	5
Abdominal pain	5
Diarrhea	4
Red eyes	4

*doros* ticks and their bites often go unnoticed because the ticks usually feed in the dark, have brief feeding times, and inflict bites that are relatively painless.

Diagnosis of relapsing fever is usually made by finding loosely coiled spirochetes in a peripheral blood smear, and/or by the inoculation of whole blood intraperitoneally into young mice or guinea pigs. The disease is often self-limiting, but treatment with tetracyclines is effective (4).

Although relapsing fever is rarely considered in the diagnosis of a febrile episode, it is possible that this diagnosis should be considered in febrile illnesses in persons who have stayed overnight at the North Rim of the Grand Canyon since early June 1973.

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CURRENT TRENDS  
PRIMARY AND SECONDARY SYPHILIS — United States

In June 1973, a total of 2,079 cases of primary and secondary syphilis were reported in the United States — 0.3% fewer than in June 1972 (Table 2). Cases increased from 19,019 in 1968 to 24,429 in 1972, an overall increase of 28.5% or an average of 6.6% per year. In the 3-month period January-March 1973, cases increased by 4.7%; in April-June, cases increased by 0.5%. These data suggest that reported cases may presently be leveling off after 4 consecutive years of increase.

The national trend is not uniformly mirrored in individual states, where both significant increases and significant decreases in syphilis cases are being reported. While a variety of local factors influenced the trends within individual states, a strong syphilis epidemiology program was typical of states experiencing significant decreases in reported cases.

(Reported by the Venereal Disease Branch, Bureau of State Services, CDC.)

Table 2  
SUMMARY OF REPORTED CASES OF INFECTIOUS SYPHILIS

CASES OF PRIMARY AND SECONDARY SYPHILIS: By Reporting Areas June 1973 and June 1972 - Provisional Data

Reporting Area	June		Cumulative Jan.-June		Reporting Area	June		Cumulative Jan.-June	
	1973	1972	1973	1972		1973	1972	1973	1972
NEW ENGLAND	85	57	571	437	EAST SOUTH CENTRAL	132	129	718	687
Maine	1	1	12	14	Kentucky	19	36	196	131
New Hampshire	1	1	5	5	Tennessee	51	34	223	255
Vermont	2	1	12	11	Alabama	33	19	95	91
Massachusetts	55	29	388	243	Mississippi	29	40	204	210
Rhode Island	2	5	11	21	WEST SOUTH CENTRAL	173	248	1,338	1,537
Connecticut	25	20	143	143	Arkansas	14	12	77	113
MIDDLE ATLANTIC	455	557	2,840	2,905	Louisiana	62	90	415	446
Upstate New York	43	24	199	215	Oklahoma	11	12	96	52
New York City	260	436	1,770	2,034	Texas	86	134	750	926
Pa. (Excl. Phila.)	20	9	127	84	MOUNTAIN	41	39	301	250
Philadelphia	44	21	233	156	Montana	1	3	1	4
New Jersey	88	67	511	416	Idaho	—	—	6	3
EAST NORTH CENTRAL	188	166	1,157	1,283	Wyoming	—	—	2	8
Ohio	28	21	143	165	Colorado	10	8	114	30
Indiana	28	13	164	99	New Mexico	8	5	39	57
Downstate Illinois	17	7	97	76	Arizona	17	15	92	104
Chicago	72	63	455	521	Utah	—	2	8	13
Michigan	41	60	257	401	Nevada	5	6	39	31
Wisconsin	2	2	41	21	PACIFIC	345	301	2,170	1,740
WEST NORTH CENTRAL	25	26	151	136	Washington	12	10	78	63
Minnesota	4	5	54	19	Oregon	5	2	24	23
Iowa	9	6	22	22	California	324	286	2,027	1,631
Missouri	11	7	56	64	Alaska	2	—	9	9
North Dakota	—	—	1	—	Hawaii	2	3	32	14
South Dakota	1	—	2	1	U.S. TOTAL	2,079	2,086	12,660	12,095
Nebraska	—	5	2	11	TERRITORIES	37	52	410	429
Kansas	—	3	14	19	Puerto Rico	34	47	392	384
SOUTH ATLANTIC	635	563	3,414	3,120	Virgin Islands	3	5	18	45
Delaware	10	3	53	32					
Maryland	83	88	419	478					
District of Columbia	66	61	391	400					
Virginia	54	47	374	217					
West Virginia	—	—	8	13					
North Carolina	63	55	323	277					
South Carolina	47	32	323	246					
Georgia	121	114	611	665					
Florida	191	163	912	792					

Note: Cumulative Totals include revised and delayed reports through previous months.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

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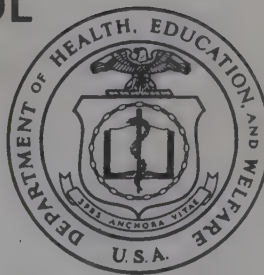
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# Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE  
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## EPIDEMIOLOGIC NOTES AND REPORTS HUMAN BUBONIC PLAGUE - Arizona

Between July 6 and 7, 1973, a 9-year-old girl from near Payson, Arizona, became ill with headache, fever, and right axillary lymphadenopathy. Four days later, she developed what appeared to be a metastatic anterior chamber endophthalmitis. A blood specimen obtained on July 11 yielded a gram-negative organism identified in the Arizona State Laboratory on July 19 as *Yersinia pestis*. This identification was corroborated by the Plague Section, Vectorborne Diseases Branch, Bureau of Laboratories, CDC, in Fort Collins, Colorado.

During the 2 weeks before diagnosis of her illness was confirmed, the patient was treated with various antibiotics and topical eye drops. Initial specific antibiotic therapy for *Y. pestis* was started July 19 and included parenteral tetracycline and chloramphenicol eye drops. She has also been started on a short course of streptomycin sulfate to help

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resolve the possible anterior chamber septic endophthalmitis and marked lymphadenitis.

She has improved generally, and her axillary bubo has diminished since specific therapy was instituted. Her ocular problems have also shown considerable improvement, although her pupil remains markedly dilated.

Initial epidemiologic investigation suggests she was exposed near her mountain cabin home. *Y. pestis* was detected in the animals of this area in February 1972 when a single

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	30th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 30 WEEKS		
	July 28, 1973	July 29, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	149	103	118	1,651	1,315	1,315
Brucellosis	4	7	4	107	97	116
Chickenpox	482	709	---	143,121	111,444	---
Diphtheria	3	3	2	104	60	94
Encephalitis, primary:						
Arthropod-borne and unspecified	33	18	22	681	490	577
Encephalitis, post-infectious	5	7	7	182	179	240
Hepatitis, serum (Hepatitis B)	190	179	115	4,550	5,344	4,081
Hepatitis, infectious (Hepatitis A)	895	1,035	1,035	29,100	32,036	32,036
Malaria	3	10	28	141	632	1,548
Measles (rubeola)	189	171	259	23,449	25,935	25,935
Meningococcal infections, total	19	31	34	954	909	1,683
Civilian	18	30	33	930	873	1,509
Military	1	1	1	24	36	174
Mumps	470	525	780	52,881	54,356	71,751
Rubella (German measles)	144	188	270	25,305	19,821	41,756
Tetanus	1	1	3	48	64	64
Tuberculosis, new active	619	905	---	18,390	19,295	---
Tularemia	2	1	6	84	75	86
Typhoid fever	5	6	7	414	179	171
Typhus, tick-borne (Rky. Mt. spotted fever)	24	25	24	377	269	213
Venereal Diseases:						
Gonorrhea	18,402	16,787	---	456,982	407,485	---
Syphilis, primary and secondary	528	520	---	15,062	13,856	---
Rabies in animals	74	76	74	2,141	2,562	2,158

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total: Calif.-1	3
Botulism:	13	Paralytic: Calif.-1	3
Congenital rubella syndrome:	17	Psittacosis:	11
Leprosy: Calif.-3, Tex.-2	62	Rabies in man:	—
Leptospirosis: Ida.-1	19	Trichinosis: Calif.-1, N.Y.C.-14, Pa.-2	61
Plague: *	1	Typhus, murine:	23

\*Delayed reports: Plague: Ariz. 1

**PLAGUE — Continued**

plague case resulted from direct contact with a wild lynx (MMWR, Vol. 21, No. 10). A serologic survey of wild carnivore populations last year showed widespread, intensive plague activity on the Coconino Plateau and in contiguous, ecologically similar areas immediately north of the site where this case apparently originated. The State health department in

conjunction with CDC is conducting field studies to determine the extent and nature of the problem.

(Reported by Frank Marks, Assistant Epidemiologist, Philip M. Hotchkiss, D.V.M., State Epidemiologist, Arizona State Department of Health; and the Plague Section, Vectorborne Diseases Branch, Fort Collins, Colorado, Bureau of Laboratories, CDC.)

**MALARIA — California**

On May 12, 1973, a couple from Los Angeles suddenly became ill with chills, fever, sweats, headache, photophobia, myalgia, and arthralgia. The wife also experienced nausea and vomiting. They consulted a private physician who diagnosed influenza and prescribed tetracycline. The following day, because of persisting symptoms, they visited a hospital emergency room and were told that they had a viral syndrome. On May 14, they felt somewhat better, but on May 15, their symptoms became more severe—with temperatures to 105°F. They were then seen in another emergency room where their blood smears revealed plasmodial ring forms. Each was given 1 gm of chloroquine phosphate and transferred to the Communicable Disease Ward at the Los Angeles County-University of Southern California (LAC-USC) Medical Center. Laboratory studies on admission revealed no evidence of renal disease, hemolysis, or red cell defects, but the wife's hematocrit dropped from 40% to 32% within 24 hours of admission. The patients were treated with a 3-day course of chloroquine followed by 2 weeks of primaquine and recovered.

The patients' travel history revealed that they and their 10-year-old son had returned from a trip around the world on May 2. They had made stops in Hong Kong, Singapore, Bangkok, Bombay, Tel Aviv, Bethlehem, Jerusalem, Athens, Rome, Madrid, and Lagos. They spent the most time in Nigeria, April 27-May 2, where they camped in the countryside. At no time did they take antimalarial chemoprophylaxis. Only the son recalled being bitten by mosquitoes.

On May 17, the patients' home was visited, and their son was examined; he was asymptomatic and appeared well. Blood was obtained for thick and thin smears and serologic studies, and he was given a 6-week supply of chloroquine phosphate for post-exposure prophylaxis. However, 15 hours later, before taking any medication, he had a shaking chill

and temperature of 105°F. Simultaneously, the Los Angeles County Health Department Parasitology Laboratory reported a small number of ring forms in his blood smear. He was seen as an outpatient at LAC-USC Medical Center, was treated with chloroquine phosphate and primaquine, and recovered rapidly.

Blood smears from all patients were reviewed at CDC, and the species was identified as *Plasmodium falciparum*.

(Reported by Arvid Underman, M.D., Resident in Medicine, Arthur Dover, M.D., Resident in Pediatrics, Allen Mathies, M.D., Chief, Communicable Disease Service, Los Angeles County-University of Southern California Medical Center; Ichiro Kamei, M.D., Chief, Acute Communicable Disease Control Division, Ralph R. Sachs, M.D., Deputy Director, Los Angeles Community Health Services; Ronald Roberto, M.D., Medical Epidemiologist, California State Department of Public Health; and an EIS Officer.)

**Editorial Note**

The mean intrinsic incubation period of *P. falciparum* malaria is 12 days, and almost all infections become manifest within 27 days after acquisition. Thus, since the incubation period is compatible and since *P. falciparum* is the most common malaria species in West Africa, these patients most likely acquired their infection in Nigeria. Falciparum malaria may not cause the classic paroxysms of chills, fever, and diaphoresis characteristic of other forms of malaria. The infection may mimic influenza, but it can progress rapidly and cause death, particularly in patients who have no prior immunity. To diagnose malaria in a patient with fever of unknown origin, it is essential that the examining physician obtain a travel history. Primaquine is only indicated in the treatment of the relapsing malarias (*P. vivax*, *P. ovale*), not in falciparum malaria.

**DIPHTHERIA — Washington**

On February 22, 1973, a 14-year-old girl from Georgeville, Washington, presented to her physician with fever, marked weakness, a severe sore throat, cervical lymphadenopathy, and respiratory distress. Physical examination revealed a pharyngeal membrane. The clinical diagnosis of diphtheria was made, and the patient was treated with antitoxin. The clinical diagnosis was subsequently confirmed by culture.

On February 26, examination of the contacts of this patient revealed another pharyngeal case of diphtheria in a 12-year-old girl. In addition, specimens from the skin lesions of 2 neighborhood children with impetigo were cultured and were found positive for *Corynebacterium diphtheriae* on February 28. The same day, 3 additional children presented to their physicians with symptoms compatible with diphtheria.

By March 19, a total of 27 culture-proven diphtheria

cases and 54 carriers had been identified among the residents of Georgeville and 2 nearby communities, Billyville and Goldendale. Three of the ill persons had massive cervical lymphadenopathy, 11 had pharyngeal membranes, and 13 had nasal lesions either of the external nares or extending as a sore onto the upper lip. Two patients had pharyngeal paralysis, but there were no cases of myocarditis and no deaths. Of 27 *C. diphtheriae* isolates from cases, 24 were intermedius and 3 were mitis strains. Of 54 *C. diphtheriae* isolates from carriers, 49 were intermedius and 5 were mitis. Infection was eradicated with oral erythromycin in all 27 symptomatic persons and 54 carriers, as documented by 2 negative follow-up cultures.

Four cases of diphtheritic impetigo were found in children. Two of the children with impetigo were primary school

(Continued on page 255)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JULY 28, 1973 AND JULY 29, 1972 (30th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES .....	149	4	482	3	104	33	18	5	190	895	1,035
NEW ENGLAND .....	6	-	63	-	3	1	2	-	3	45	60
Maine *	-	-	1	-	-	-	-	-	-	-	5
New Hampshire *	1	-	-	-	-	-	-	-	-	5	6
Vermont .....	-	-	-	-	-	-	-	-	-	2	1
Massachusetts .....	2	-	36	-	1	-	2	-	1	19	33
Rhode Island .....	3	-	9	-	2	1	-	-	2	6	4
Connecticut .....	-	-	17	-	-	-	-	-	-	13	11
MIDDLE ATLANTIC .....	3	-	55	-	-	-	1	-	41	124	150
Upstate New York .....	2	-	3	-	-	-	-	-	7	29	42
New York City .....	-	-	52	-	-	-	-	-	6	20	38
New Jersey *	-	-	NN	-	-	-	-	-	20	33	44
Pennsylvania .....	1	-	-	-	-	-	1	-	8	42	26
EAST NORTH CENTRAL .....	44	1	209	-	-	8	7	2	42	172	184
Ohio .....	16	-	19	-	-	3	2	-	19	48	46
Indiana .....	5	-	16	-	-	-	1	-	-	12	12
Illinois .....	4	-	-	-	-	-	1	2	10	33	50
Michigan .....	18	1	37	-	-	5	3	-	12	72	71
Wisconsin .....	1	-	137	-	-	-	-	-	1	7	5
WEST NORTH CENTRAL .....	1	-	7	-	7	1	-	-	5	75	34
Minnesota *	-	-	-	-	-	-	-	-	1	-	1
Iowa .....	1	-	4	-	-	-	-	-	-	5	7
Missouri *	-	-	-	-	-	1	-	-	2	58	6
North Dakota .....	-	-	2	-	-	-	-	-	-	-	1
South Dakota .....	-	-	-	-	7	-	-	-	-	3	2
Nebraska .....	-	-	1	-	-	-	-	-	-	1	3
Kansas .....	-	-	-	-	-	-	-	-	2	8	14
SOUTH ATLANTIC .....	17	-	50	-	-	6	-	-	15	110	167
Delaware .....	-	-	2	-	-	-	-	-	-	-	1
Maryland .....	1	-	7	-	-	-	-	-	1	9	21
District of Columbia .....	2	-	2	-	-	-	-	-	-	4	1
Virginia .....	5	-	-	-	-	1	-	-	-	7	24
West Virginia .....	3	-	28	-	-	-	-	-	-	5	7
North Carolina .....	2	-	NN	-	-	2	-	-	3	34	49
South Carolina .....	1	-	11	-	-	-	-	-	-	12	5
Georgia .....	-	-	-	-	-	-	-	-	-	7	12
Florida .....	3	-	-	-	-	3	-	-	11	32	47
EAST SOUTH CENTRAL .....	11	1	6	-	-	2	2	2	10	47	73
Kentucky .....	4	-	1	-	-	-	-	-	10	10	28
Tennessee .....	6	1	NN	-	-	2	-	1	-	31	27
Alabama .....	-	-	3	-	-	-	2	1	-	1	9
Mississippi .....	1	-	2	-	-	-	-	-	-	5	9
WEST SOUTH CENTRAL .....	17	1	26	-	9	10	2	-	29	135	102
Arkansas *	1	-	1	-	-	-	-	-	-	5	10
Louisiana .....	5	-	NN	-	-	-	-	-	4	20	9
Oklahoma .....	3	-	-	-	-	10	2	-	1	18	20
Texas .....	8	1	25	-	9	-	-	-	24	92	63
MOUNTAIN .....	1	-	29	-	7	-	1	-	2	33	68
Montana .....	1	-	1	-	-	-	-	-	-	2	3
Idaho .....	-	-	-	-	-	-	-	-	-	4	9
Wyoming .....	-	-	-	-	-	-	-	-	-	1	1
Colorado .....	-	-	16	-	-	-	-	-	-	12	14
New Mexico .....	-	-	9	-	6	-	1	-	-	12	17
Arizona *	-	-	-	-	1	-	-	-	-	-	10
Utah *	-	-	3	-	-	-	-	-	2	2	11
Nevada .....	-	-	-	-	-	-	-	-	-	-	3
PACIFIC .....	49	1	37	3	78	5	3	1	43	154	197
Washington .....	8	-	25	3	70	-	-	-	1	18	13
Oregon .....	-	-	-	-	3	1	-	-	-	14	22
California .....	41	1	-	-	3	4	3	1	42	122	152
Alaska .....	-	-	4	-	2	-	-	-	-	-	5
Hawaii .....	-	-	8	-	-	-	-	-	-	-	5
Guam *	-	-	-	-	-	-	-	-	-	-	1
Puerto Rico .....	-	-	2	-	-	-	-	-	1	8	16
Virgin Islands .....	-	-	4	-	-	-	-	-	-	-	-

\* Delayed reports: Aseptic meningitis: N.H. 2, N. J. delete 1, Ark. 1

Brucellosis: Ark. 1

Chickenpox: Me. 3, Utah 2, Guam 3

Diphtheria: Me. delete 1

Hepatitis B: N. H. 1, N. J. 6, Minn. 1, Ark. 1, Ariz. 1, Utah 1

Hepatitis A: Me. 7, N. H. delete 1, N. J. 30, Minn. delete 1,

Mo. delete 2, Ark. 1, Ariz. 4, Utah 3, Guam 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JULY 28, 1973 AND JULY 29, 1972 (30th WEEK) — Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	3	141	189	23,449	25,935	19	954	909	470	52,881	144	25,305
NEW ENGLAND .....	—	12	18	7,332	3,005	—	44	37	27	2,667	9	3,540
Maine *	—	—	—	64	240	—	1	3	1	288	—	68
New Hampshire .....	—	—	1	855	227	—	6	3	—	177	—	353
Vermont .....	—	2	1	118	120	—	2	—	—	241	—	43
Massachusetts .....	—	6	10	3,901	639	—	12	17	14	790	3	1,997
Rhode Island .....	—	—	2	602	519	—	3	10	7	301	3	209
Connecticut .....	—	4	4	1,792	1,260	—	20	4	5	870	3	870
MIDDLE ATLANTIC .....	—	21	57	2,314	898	1	127	116	89	6,881	22	4,108
Upstate New York .....	—	12	25	773	123	—	45	30	NN	NN	11	385
New York City .....	—	1	4	851	236	1	26	35	72	4,254	3	441
New Jersey *	—	4	13	379	484	—	28	24	12	1,463	8	2,996
Pennsylvania .....	—	4	15	311	55	—	28	27	5	1,164	—	286
EAST NORTH CENTRAL .....	—	19	80	8,262	10,705	4	125	126	87	13,760	29	5,732
Ohio .....	—	3	—	278	231	3	56	53	7	2,614	4	670
Indiana .....	—	3	18	613	1,216	—	4	11	23	1,134	9	917
Illinois .....	—	10	25	1,987	3,956	—	24	25	22	2,316	7	903
Michigan .....	—	3	23	4,282	1,946	1	36	32	13	3,835	5	1,769
Wisconsin .....	—	—	14	1,102	3,356	—	5	5	22	3,861	4	1,473
WEST NORTH CENTRAL .....	—	5	1	431	920	2	74	66	8	4,508	1	1,189
Minnesota .....	—	1	1	19	19	1	6	17	—	76	1	218
Iowa .....	—	—	—	276	647	—	17	2	—	2,784	—	184
Missouri .....	—	1	—	48	159	1	31	20	—	614	—	254
North Dakota .....	—	1	—	56	51	—	3	—	—	64	—	276
South Dakota .....	—	—	—	—	5	—	4	2	3	17	—	23
Nebraska .....	—	1	—	5	18	—	6	9	5	117	—	139
Kansas .....	—	1	—	27	21	—	7	16	—	836	—	95
SOUTH ATLANTIC .....	—	22	7	1,166	2,056	4	158	205	59	6,225	11	2,040
Delaware .....	—	—	—	8	48	—	—	1	3	254	4	12
Maryland .....	—	3	3	12	15	—	22	33	5	605	—	10
District of Columbia .....	—	1	—	5	2	—	4	9	12	81	1	3
Virginia .....	—	5	—	409	58	1	29	45	1	661	—	616
West Virginia .....	—	—	3	186	253	—	2	7	24	2,161	2	267
North Carolina .....	—	5	—	4	30	2	35	26	NN	NN	1	200
South Carolina .....	—	1	1	56	214	—	10	19	1	347	1	81
Georgia .....	—	3	—	147	161	1	20	8	—	26	—	11
Florida .....	—	4	—	339	1,275	—	36	57	13	2,090	2	840
EAST SOUTH CENTRAL .....	1	5	2	587	1,020	1	89	75	52	4,234	14	1,243
Kentucky .....	1	1	2	363	518	—	31	24	11	1,268	1	376
Tennessee .....	—	—	—	165	191	1	36	28	38	1,928	11	495
Alabama .....	—	4	—	5	131	—	15	15	3	584	—	183
Mississippi .....	—	—	—	54	180	—	7	8	—	454	2	189
WEST SOUTH CENTRAL .....	—	9	6	629	1,391	2	147	111	37	3,458	12	1,415
Arkansas *	—	—	—	69	13	—	13	9	1	340	—	112
Louisiana .....	—	2	—	83	82	2	30	34	3	69	—	100
Oklahoma .....	—	1	—	51	9	—	25	6	2	409	9	175
Texas .....	—	6	6	426	1,287	—	79	62	31	2,640	3	1,028
MOUNTAIN .....	1	9	7	568	1,727	2	29	16	25	2,373	14	2,345
Montana .....	—	1	—	15	12	—	6	2	1	221	—	499
Idaho .....	—	—	4	246	21	—	4	4	—	110	—	33
Wyoming .....	—	—	—	77	51	—	—	1	—	418	—	5
Colorado .....	1	2	2	100	514	2	9	3	16	406	5	1,535
New Mexico .....	—	2	1	112	110	—	3	2	8	949	9	186
Arizona .....	—	4	—	16	866	—	3	1	—	140	—	17
Utah *	—	—	—	1	153	—	2	2	—	121	—	67
Nevada .....	—	—	—	1	—	—	2	1	—	8	—	3
PACIFIC .....	1	39	11	2,160	4,213	3	161	157	86	8,775	32	3,693
Washington .....	—	3	—	996	970	—	17	12	4	1,405	1	651
Oregon .....	—	2	2	449	113	—	12	13	32	1,623	3	768
California *	1	31	9	632	3,024	3	126	123	49	4,836	28	2,239
Alaska .....	—	2	—	65	11	—	6	6	—	672	—	9
Hawaii .....	—	1	—	18	95	—	—	3	1	239	—	26
Guam *	—	—	—	20	8	—	—	11	—	16	—	8
Puerto Rico .....	—	—	19	1,701	552	—	7	4	9	625	—	26
Virgin Islands .....	—	—	—	—	1	—	—	2	—	17	—	2

\*Delayed reports: Measles: Me. 1, N. J. delete 2, Guam 9

Mumps: Me 5, Ark. 1, P. R. 1

Rubella: N. J. delete 45, Utah 1, Calif. delete 74, Guam 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING JULY 28, 1973 AND JULY 29, 1972 (30th WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES . . . . .	48	619	18,390	84	5	414	24	377	18,402	528	74	2,141
NEW ENGLAND . . . . .	2	15	645	—	1	6	—	1	571	23	3	92
Maine . . . . .	—	2	50	—	—	—	—	—	25	1	—	53
New Hampshire*. . . . .	—	2	37	—	—	—	—	—	28	—	3	31
Vermont *. . . . .	—	1	18	—	—	—	—	—	11	—	—	3
Massachusetts . . . . .	—	8	345	—	1	6	—	1	243	4	—	4
Rhode Island . . . . .	1	—	45	—	—	—	—	—	39	—	—	—
Connecticut . . . . .	1	2	150	—	—	—	—	—	225	18	—	1
MIDDLE ATLANTIC . . . . .	7	104	3,617	—	1	38	4	21	2,681	117	3	19
Upstate New York . . . . .	1	33	650	—	—	6	—	9	245	10	1	9
New York City . . . . .	3	43	1,374	—	—	14	—	1	1,376	75	—	—
New Jersey . . . . .	2	—	622	—	1	10	2	5	334	16	—	—
Pennsylvania . . . . .	1	28	971	—	—	8	2	6	726	16	2	10
EAST NORTH CENTRAL . . . . .	7	99	2,816	2	—	22	1	17	2,090	20	6	197
Ohio . . . . .	1	29	853	—	—	9	1	13	769	4	—	26
Indiana . . . . .	—	14	367	—	—	—	—	—	185	5	1	46
Illinois . . . . .	3	38	849	—	—	5	—	4	226	2	—	54
Michigan . . . . .	1	18	670	2	—	6	—	—	644	9	—	3
Wisconsin . . . . .	2	—	77	—	—	2	—	—	266	—	5	68
WEST NORTH CENTRAL . . . . .	4	14	743	10	—	13	2	13	1,063	14	32	691
Minnesota . . . . .	—	—	85	—	—	4	—	—	261	—	9	234
Iowa . . . . .	—	1	81	—	—	—	1	6	165	7	9	144
Missouri *. . . . .	3	6	347	10	—	7	—	6	260	7	5	62
North Dakota . . . . .	1	2	27	—	—	—	—	—	12	—	8	113
South Dakota . . . . .	—	2	51	—	—	1	—	—	79	—	—	77
Nebraska . . . . .	—	1	47	—	—	1	1	1	145	—	—	3
Kansas . . . . .	—	2	105	—	—	—	—	—	141	—	1	58
SOUTH ATLANTIC . . . . .	8	142	3,639	6	2	225	9	183	4,027	196	5	172
Delaware . . . . .	—	2	50	—	—	—	—	7	25	—	—	2
Maryland . . . . .	—	16	385	—	1	6	1	7	463	15	1	9
District of Columbia . . . . .	—	5	166	—	—	—	—	—	477	48	—	—
Virginia . . . . .	2	7	478	1	—	1	1	39	515	45	—	53
West Virginia . . . . .	—	10	172	—	—	2	—	1	40	2	1	18
North Carolina *. . . . .	—	30	578	1	—	4	7	76	517	20	—	1
South Carolina . . . . .	—	7	323	—	1	4	—	26	447	28	1	3
Georgia . . . . .	1	30	610	3	—	1	—	27	506	10	2	55
Florida . . . . .	5	35	877	1	—	207	—	—	1,037	28	—	31
EAST SOUTH CENTRAL . . . . .	7	60	1,658	6	—	17	2	55	1,659	20	8	343
Kentucky . . . . .	1	13	385	1	—	2	—	—	190	8	4	187
Tennessee . . . . .	4	15	514	4	—	8	2	27	562	6	4	119
Alabama . . . . .	2	19	443	—	—	2	—	9	602	1	—	37
Mississippi . . . . .	—	13	316	1	—	5	—	19	305	5	—	—
WEST SOUTH CENTRAL . . . . .	8	85	1,863	58	—	18	5	74	3,054	63	7	407
Arkansas *. . . . .	—	8	218	40	—	3	—	12	609	4	2	88
Louisiana *. . . . .	3	11	295	—	—	6	—	—	527	24	1	33
Oklahoma . . . . .	3	7	163	16	—	2	5	60	200	1	4	132
Texas . . . . .	2	59	1,187	2	—	7	—	2	1,718	34	—	154
MOUNTAIN . . . . .	—	13	594	1	—	6	—	6	574	5	1	19
Montana . . . . .	—	1	29	—	—	—	—	—	22	—	—	—
Idaho . . . . .	—	2	25	—	—	—	—	1	45	—	—	—
Wyoming . . . . .	—	—	11	—	—	1	—	1	14	—	—	—
Colorado . . . . .	—	—	114	—	—	1	—	1	167	1	—	—
New Mexico . . . . .	—	2	130	1	—	1	—	3	120	1	—	2
Arizona . . . . .	—	7	226	—	—	3	—	—	170	1	1	17
Utah *. . . . .	—	—	21	—	—	—	—	—	9	—	—	—
Nevada . . . . .	—	1	38	—	—	—	—	—	27	2	—	—
PACIFIC . . . . .	5	87	2,815	1	1	69	1	7	2,683	70	9	201
Washington . . . . .	1	1	232	—	—	6	1	4	210	2	—	2
Oregon . . . . .	1	6	155	—	—	2	—	2	300	3	1	2
California *. . . . .	3	76	2,195	1	1	60	—	1	2,041	62	8	190
Alaska . . . . .	—	—	67	—	—	—	—	—	73	—	—	7
Hawaii . . . . .	—	4	166	—	—	1	—	—	59	3	—	—
Guam *. . . . .	—	—	28	—	—	—	—	—	—	—	—	—
Puerto Rico . . . . .	4	8	285	—	1	3	—	—	45	8	—	29
Virgin Islands . . . . .	—	—	—	—	—	—	—	—	7	—	—	—

\*Delayed reports: Tetanus: Mo. delete 1  
 TB: N. H. delete 1, N. C. delete 5, Guam 1  
 Tularemia: Ark. 4

Gonorrhea: La. delete 8, Utah 28  
 Syphilis: Vt. delete 1, La. delete 1, Calif. 93

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING JULY 28, 1973

Week No.

30

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	665	392	28	26	SOUTH ATLANTIC	1,387	721	92	48
Boston, Mass.	183	100	10	9	Atlanta, Ga.	155	87	8	6
Bridgeport, Conn.	37	21	—	1	Baltimore, Md.	223	120	5	1
Cambridge, Mass.	19	11	—	3	Charlotte, N. C.	66	31	5	—
Fall River, Mass.	27	21	—	—	Jacksonville, Fla.	95	43	7	1
Hartford, Conn.	66	35	1	1	Miami, Fla.	138	72	2	5
Lowell, Mass.	36	25	—	1	Norfolk, Va.	59	37	2	4
Lynn, Mass.	15	12	—	—	Richmond, Va.	105	56	3	3
New Bedford, Mass.	28	16	—	2	Savannah, Ga.	52	35	—	4
New Haven, Conn.	52	25	5	—	St. Petersburg, Fla.	72	55	2	5
Providence, R. I.	59	32	3	6	Tampa, Fla.	70	36	4	7
Somerville, Mass.	13	9	—	—	Washington, D. C.	310	129	51	10
Springfield, Mass.	41	26	7	1	Wilmington, Del.	42	20	3	2
Waterbury, Conn.	28	22	—	1	EAST SOUTH CENTRAL	655	369	26	31
Worcester, Mass.	61	37	2	1	Birmingham, Ala.	90	52	6	1
MIDDLE ATLANTIC	3,139	1,865	116	133	Chattanooga, Tenn.	60	34	3	3
Albany, N. Y.	58	36	5	1	Knoxville, Tenn.	40	26	1	3
Allentown, Pa.	35	19	2	1	Louisville, Ky.	133	69	2	12
Buffalo, N. Y.	124	77	3	8	Memphis, Tenn.	154	85	9	5
Camden, N. J.	41	23	2	—	Mobile, Ala.	55	32	4	2
Elizabeth, N. J.	26	16	—	1	Montgomery, Ala.	35	23	1	—
Erie, Pa.	36	26	1	3	Nashville, Tenn.	88	48	—	5
Jersey City, N. J.	57	37	—	2	WEST SOUTH CENTRAL	1,252	645	54	31
Newark, N. J.	65	25	3	2	Austin, Tex.	33	20	1	3
New York City, N. Y. †	1,538	925	53	63	Baton Rouge, La.	82	45	3	1
Paterson, N. J.	38	28	1	4	Corpus Christi, Tex.	57	25	5	2
Philadelphia, Pa.	490	289	20	7	Dallas, Tex.	168	77	10	4
Pittsburgh, Pa.	190	99	9	15	El Paso, Tex.	73	39	6	3
Reading, Pa.	40	27	—	9	Fort Worth, Tex.	82	42	1	—
Rochester, N. Y.	153	86	7	7	Houston, Tex.	220	100	7	2
Schenectady, N. Y.	24	14	1	2	Little Rock, Ark.	74	32	2	3
Scranton, Pa.	39	25	2	—	New Orleans, La.	123	66	4	—
Syracuse, N. Y.	75	46	4	2	Oklahoma City, Okla. *	88	48	4	1
Trenton, N. J.	41	20	3	2	San Antonio, Tex.	143	81	6	5
Utica, N. Y.	30	18	—	2	Shreveport, La.	49	29	1	1
Yonkers, N. Y.	39	29	—	2	Tulsa, Okla.	60	41	4	6
EAST NORTH CENTRAL	2,412	1,348	106	52	MOUNTAIN	531	294	23	25
Akron, Ohio	69	40	4	—	Albuquerque, N. Mex.	61	30	1	5
Canton, Ohio	45	23	3	—	Colorado Springs, Colo.	47	33	1	5
Chicago, Ill.	650	348	41	13	Denver, Colo.	99	58	4	4
Cincinnati, Ohio	144	87	1	5	Las Vegas, Nev.	33	12	3	1
Cleveland, Ohio	204	104	3	2	Ogden, Utah	26	15	2	1
Columbus, Ohio	141	73	1	2	Phoenix, Ariz.	120	65	5	3
Dayton, Ohio	107	67	5	1	Pueblo, Colo.	23	13	—	5
Detroit, Mich.	276	156	15	10	Salt Lake City, Utah	57	37	3	—
Evansville, Ind.	33	24	—	—	Tucson, Ariz.	65	31	4	1
Fort Wayne, Ind.	55	22	—	2	PACIFIC	1,571	953	59	32
Gary, Ind.	28	15	—	2	Berkeley, Calif.	13	10	—	—
Grand Rapids, Mich.	50	38	2	5	Fresno, Calif.	51	26	3	—
Indianapolis, Ind.	157	80	8	2	Glendale, Calif.	23	19	—	1
Madison, Wis.	29	13	3	1	Honolulu, Hawaii	63	31	5	—
Milwaukee, Wis.	130	81	3	2	Long Beach, Calif.	105	64	7	—
Peoria, Ill.	40	23	4	—	Los Angeles, Calif.	517	316	19	10
Rockford, Ill.	39	18	4	2	Oakland, Calif.	68	44	3	—
South Bend, Ind.	48	31	—	2	Pasadena, Calif.	33	27	—	1
Toledo, Ohio	107	66	8	1	Portland, Oreg.	118	71	8	1
Youngstown, Ohio	60	39	1	—	Sacramento, Calif.	51	28	—	1
WEST NORTH CENTRAL	716	436	29	24	San Diego, Calif.	129	84	5	3
Des Moines, Iowa	56	36	2	1	San Francisco, Calif.	151	81	2	3
Duluth, Minn.	19	13	—	2	San Jose, Calif.	53	31	—	—
Kansas City, Kans.	24	16	3	—	Seattle, Wash.	121	67	7	2
Kansas City, Mo.	113	70	5	—	Spokane, Wash.	41	29	—	1
Lincoln, Nebr.	13	9	—	3	Tacoma, Wash.	34	25	—	9
Minneapolis, Minn.	89	52	4	5	Total	12,328	7,023	533	402
Omaha, Nebr.	83	42	5	1	Expected Number	12,183	6,893	550	391
St. Louis, Mo.	224	136	6	6	Cumulative Total (includes reported corrections for previous weeks)	392,782	231,745	14,552	16,480
St. Paul, Minn.	66	46	3	2					
Wichita, Kans.	29	16	1	4					

†Delayed report for week ending July 21, 1973

\*Estimate based on average percent of divisional total

**DIPHTHERIA — Continued**

students, and 1 was enrolled in a Headstart program. Among 78 classmates of these 3 children, 19 had positive cultures for *C. diphtheriae*. In contrast, among 104 classmates of 5 children with respiratory diphtheria, only 7 had positive cultures.

Control measures included quarantine and erythromycin treatment of all household contacts of cases or carriers. Case-finding uncovered 4 cases on home visits, and another 7 cases were culture-positive before the onset of symptoms. An immunization program reached more than 10,000 persons in the area. Adults were given 3 primary Td vaccinations over a 3-month period, if they gave no history of previous immunizations. Children under 6 years were given DPT.

No further diphtheria cases have been reported from the area in the past 3 months, and there has been no evidence of spread from Goldendale to other areas.

(Reported by Helen Conboy, P.H.N., Donald Champaign,

M.D., Health Officer, Southwest Washington Health District; Marshall Y. Kremers, M.D., Acting State Epidemiologist, Washington State Department of Social and Health Services, Health Services Division; and 2 EIS Officers.)

**Editorial Note**

This outbreak accounted for a portion of the increase in reported diphtheria in the Pacific Northwest in the past year. Other foci of disease have been the skid row populations of Seattle and Vancouver, British Columbia.

The role of skin diphtheria in spreading infection in this community is supported by the higher attack rates in classmates of children with diphtheritic skin lesions. Others have also proposed that skin diphtheria may provide a reservoir for this pathogen (1).

**Reference**

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**PROBABLE BOTULISM — Maryland**

On the evening of July 24, 1973, a 67-year-old farmer and his 53-year-old wife from Sunderland, Maryland, experienced the onset of nausea, vomiting, and diarrhea. On July 25, both persons developed blurred vision, diplopia, dry mouth, dysphonia, dysphagia, and generalized weakness. They were seen late that afternoon at a local hospital, where the diagnosis of botulism was suspected, and were referred to a university hospital in Baltimore.

On admission, both patients had bilateral ptosis, external ophthalmoplegia, nasal speech, symmetrical facial muscle weakness, no gag reflexes, and symmetrical proximal muscle weakness. Both were alert and had normal sensation and deep tendon reflexes. The man's pupils were dilated and nonreactive, while the woman's measured 4-6 mm and were reactive. Tensilon tests were negative in both patients. Electromyograms (EMG) demonstrated decreased amplitude of the muscle action potential in both patients, with only slight potentiation in the woman's EMG during repetitive stimulation on the first hospital day.

Both patients were given trivalent (ABE) and bivalent (AB) botulism antitoxin intravenously on July 26. Both had respiratory difficulty and required ventilatory assistance; 2 days later, a tracheostomy was performed on each. On July 27, they received intravenous calcium chloride without improvement and were begun on oral guanidine. Both are improving gradually.

The patient's 13-year-old son was admitted to the same Baltimore hospital on July 26 for observation. The history obtained on admission strongly suggested that he had shared consumption of contaminated food with his parents. Accordingly, after appropriate skin testing, he received 1 vial of trivalent antitoxin (ABE) prophylactically. He remains asymptomatic.

Epidemiologic investigation directed attention to home-canned poke salad and corn, which had been consumed by the husband and wife 2 days before the onset of illness; the son had shared the corn, but he had not eaten poke salad from the suspect jar.

Canning procedures were described by the son as follows: food was placed in a glass jar which was filled with water and sealed by a screw cap. The jar was then submerged in a large pot of water and boiled for approximately 2 hours.

Analysis of pre- and post-treatment serum specimens from both husband and wife, a post-treatment serum specimen from the son, stool specimens from all 3 family members, and numerous food items, including samples of corn and poke salad, failed to demonstrate botulinal toxin. Additional studies are in progress.

(Reported by Page C. Jett, M.D., private practitioner, Calvert County, Maryland; Dennis Torretti, M.D., Medical Intern, Craig Smith, M.D., Junior Assistant Resident, Hubert Gurley, M.D., Senior Assistant Resident, Leigh Thompson, M.D., Ph.D., Director, Medical Intensive Care Unit, Assistant Professor of Medicine, Assistant Professor of Pharmacology and Experimental Therapeutics, Johns Hopkins Hospital, Baltimore, Maryland; William T. Blair, Sanitarian, David L. Rogers, M.D., Health Officer, Calvert County Health Department; Arnold C. Salinger, Environmental Microbiologist, Maryland State Laboratory, John D. Stafford, M.D., State Epidemiologist, Maryland State Department of Health; the U.S. Food and Drug Administration; the Enterobacteriology Section, Bacteriology Branch, Bureau of Laboratories, CDC; and 2 EIS Officers.)

**Editorial Note**

Although laboratory confirmation is lacking, the patients in this outbreak had a clinical illness compatible with botulism. Since 1971 botulinal toxin has been identified in 12 of 18 foodborne botulism outbreaks reported to CDC.

Prophylactic administration of botulism antitoxin should be considered for asymptomatic persons who have consumed food suspected to be contaminated with botulinal toxin. As in this instance, the risk of anaphylaxis or serum sickness inherent in administering the antitoxin, which is prepared from horse serum, must be carefully weighed against the chance that clinical botulism may develop. Each situation demands individual consideration. Surveillance of reactions to botulism

## BOTULISM — Continued

antitoxins by CDC has revealed a reaction rate of 32% for bivalent antitoxin and 17% for trivalent antitoxin.

Although these 2 patients improved gradually after initiation of oral guanidine therapy, the efficacy of guanidine in the treatment of botulism is not established (1, 2, 3, 4).

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3. Ryan DW, Cherington M: Human type A botulism. *JAMA* 216:513, 1971
4. Faich GA, Graebuer RW, Sato S: Failure of guanidine therapy in botulism A. *N Engl J Med* 285:773, 1971

## FOLLOW-UP ON RELAPSING FEVER — Arizona

Further investigation of the recent outbreak of relapsing fever in Arizona (MMWR, Vol. 22, No. 29) has revealed 2 additional suspect cases in an 8-year-old girl from Oregon and a 52-year-old man from Utah. Both stayed overnight at the North Rim of the Grand Canyon approximately 1 week prior to onset of symptoms. Laboratory confirmation of the diagnosis is pending. No further cases have been reported in employees or their family members.

Wooden cabins on the North Rim are being sprayed with Bagon\* to kill the presumed tick vector. A postal survey is being conducted to notify tourists at risk about their possible exposure and to ascertain the occurrence of additional cases.

(Reported by David L. White, M.D., Health Officer, Lane County, Oregon, Health Department; John A. Googins, M.D., State Epidemiologist, Oregon State Division of Health; Taira Fukushima, M.D., State Epidemiologist, Utah State Division of Health; Philip M. Hotchkiss, D.V.M., State Epidemiologist, Arizona State Department of Health; and the Phoenix, Arizona, Laboratories, Ecological Investigations Program, CDC.)

\*Trade name for 2% ortho iso propoxy patenyl methyl carbonate. Inclusion of trade names does not imply endorsement by the Public Health Service or the U.S. Department of Health, Education, and Welfare.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to:

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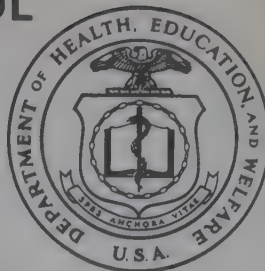


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# Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE  
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## EPIDEMIOLOGIC NOTES AND REPORTS

### OUTBREAK OF PSYCHOSOMATIC ILLNESS — Alabama

On Friday, May 11, 1973, 105 students and 3 teachers at the Berry Elementary School, Berry, Alabama, became ill with pruritus and 1 or more of the following symptoms: rash, headache, cough, weakness, faintness, and shortness of breath. Seventy persons received care at a nearby hospital emergency room. On Tuesday, May 15, and Friday, May 18, 18 and 14 students, respectively, mostly ones who had been ill on May 11, sought medical attention for the same problems. Only a few cases occurred at times other than the 3 peak days (Figure 1); 3 additional persons sought medical treatment in June. Physical examination on all 3 dates revealed anxiety, hyperventilation, simple erythema of the skin in excoriated areas, and occasional epigastric tenderness. Blood pressure and temperature were uniformly normal. Complete blood counts of 13 of those ill were normal except for slight eosinophilia in 2 cases.

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Data from questionnaires revealed that in the 6 weeks preceding the outbreak on May 11, approximately 30 cases of rash illnesses attributed to various organic causes occurred among students and faculty. These rashes were maculopapular eruptions that persisted for several days without significant pruritus. Epidemiologic investigation revealed no other similar illness in Berry or its environs before May 11. With the exception of 3 cases in the families of elementary school children and several in students at the high school where elementary classes were held on May 17 and 18, there was no secondary spread in the community.

The total enrollment in the school was 400 students and 26 staff, and the overall attack rate was 29%; among male

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

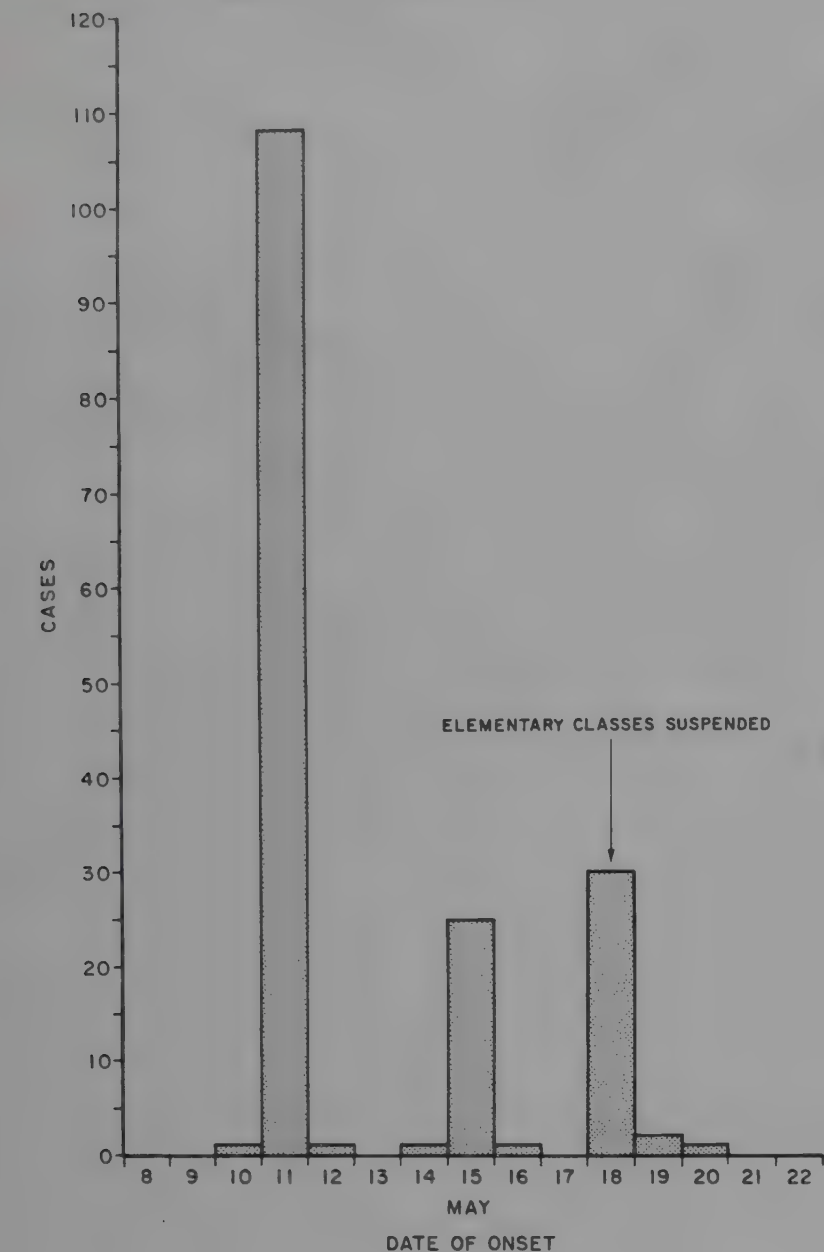
DISEASE	31st WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 31 WEEKS		
	August 4, 1973	August 5, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis . . . . .	180	156	153	1,833	1,471	1,471
Brucellosis . . . . .	2	5	5	109	102	123
Chickenpox . . . . .	449	629	— — —	143,571	112,073	— — —
Diphtheria . . . . .	—	—	—	104	60	94
Encephalitis, primary:						
Arthropod-borne and unspecified . . . . .	42	25	35	724	515	620
Encephalitis, post-infectious . . . . .	3	8	8	185	187	248
Hepatitis, serum (Hepatitis B) . . . . .	169	156	152	4,721	5,500	4,233
Hepatitis, infectious (Hepatitis A) . . . . .	913	875	964	30,051	32,911	32,911
Malaria . . . . .	2	6	37	142	638	1,633
Measles (rubeola) . . . . .	147	201	228	23,594	26,136	26,136
Meningococcal infections, total . . . . .	14	12	24	968	921	1,709
Civilian . . . . .	14	12	24	944	885	1,535
Military . . . . .	—	—	—	24	36	174
Mumps . . . . .	542	476	726	53,431	54,832	72,577
Rubella (German measles) . . . . .	141	137	344	25,467	19,958	42,181
Tetanus . . . . .	1	5	4	49	69	69
Tuberculosis, new active . . . . .	541	667	— — —	18,928	19,962	— — —
Tularemia . . . . .	1	2	2	88	77	87
Typhoid fever . . . . .	11	6	9	425	185	181
Typhus, tick-borne (Rky. Mt. spotted fever) . . . . .	26	31	19	407	300	232
Venereal Diseases:						
Gonorrhea . . . . .	17,493	15,546	— — —	474,475	423,031	— — —
Syphilis, primary and secondary . . . . .	474	541	— — —	15,535	14,397	— — —
Rabies in animals . . . . .	72	71	58	2,217	2,633	2,210

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax: . . . . .	1	Poliomyelitis, total: . . . . .	3
Botulism: . . . . .	13	Paralytic: . . . . .	3
Congenital rubella syndrome: Calif. -1 . . . . .	18	Psittacosis: Calif. -1 . . . . .	12
Leprosy: Calif. -1, Hawaii -8, Tex. -1 . . . . .	72	Rabies in man: . . . . .	—
Leptospirosis: Mich. -1 . . . . .	20	Trichinosis: Mich. -1, N.Y.C. -1 . . . . .	63
Plague: . . . . .	1	Typhus, murine: Tex. -1 . . . . .	24

PSYCHOSOMATIC ILLNESS – Continued

Figure 1  
CASES OF PSYCHOSOMATIC ILLNESS, BY DATE OF ONSET  
BERRY, ALABAMA – MAY 1973



students the rate was 18%, among females 42%. Attack rates were highest in the 3rd through 6th grades (38%), while grades 1 and 2 and the special education classes had an attack rate of 9% (Table 1).

There was no significant correlation between the use of water, playgrounds, or school buses and the onset of illness. The attacks occurred before lunchtime, so cafeteria food was not implicated. Examination of the general environment revealed no recent use of insecticides or industrial chemicals and no change in the cleaning and washing compounds used within the school.

Interviews with the affected students and teachers suggested a progression of the illness from class to class during the morning of May 11. Individuals became ill after seeing other ill students in the hallways and other public areas of the school building. The cases on May 15 and 18 occurred primarily in small groups of female classmates who had been previously affected.

Several possible causes of this illness were considered. The sudden onset and rapid course, lack of fever, and lack of secondary spread in households ruled against an infectious process. The lack of a known chemical introduction, the absence of cases in individuals from areas surrounding the school, and the symptom complex were not compatible with

Table 1  
Attack Rates of Psychosomatic Illness for Students, by Grade  
Berry (Ala.) Elementary School – May 11, 1973

Grade	Number Present	Number Responding	Number Ill	Percent Ill*
Spec. Ed.	19	17	0	0
1st	61	55	5	9
2nd	51	41	5	12
3rd	67	64	28	44
4th	60	60	24	40
5th	62	57	25	44
6th	70	70	19	27

\*No. ill/No. responding to questionnaire

known allergies or reactions to toxins. Furthermore, rapid spread apparently requiring observation of other ill persons and the prevalence of hyperventilation strongly suggested a psychosomatic etiology to the illness.

Control measures included closing the school building on May 15, suspending classes for the remainder of the school year after the occurrence of cases on May 18, and quickly informing the news media of the suspected psychological etiology of the illness with specific information on the treatment of hyperventilation.

(Reported by J. B. Robertson, M.D., Health Officer, Thelma Humber, Public Health Nurse Supervisor, Fayette County Health Department; John Kaiser, Medical Student, University of Mississippi School of Medicine; Frederick S. Wolf, M.D., State Epidemiologist, Alabama State Department of Health; a CDC Sanitarian, and 3 EIS Officers.)

Editorial Note

Outbreaks of psychosomatic illness date back to the dancing manias reported in Europe in the Middle Ages. In the past 30 years, at least 10 outbreaks diagnosed as mass hysteria have been reported in the United States (1, 2, 3, 4, 5), the United Kingdom (6, 7), and Africa (8). Five of these outbreaks occurred in schools, and in several the predominant finding was hyperventilation or faintness. Attack rates were highest for females, and recurrences were common. Laboratory results were generally within normal limits, and physical findings were minimal compared with the complaints registered by the patients. Psychologic and sociometric testing in several outbreaks revealed that those affected rated high on scales of neuroticism and that closer personal relationships often existed among those affected than those not affected. The outbreak in Berry had many of these features, and the epidemiologic investigation confirms the absence of physical or infectious agents.

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING AUGUST 4, 1973 AND AUGUST 5, 1972 (31st WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
				1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES .....	180	2	449	-	104	42	25	3	169	913	875
NEW ENGLAND .....	9	-	73	-	3	1	3	-	3	53	86
Maine *	-	-	-	-	-	-	-	-	1	3	2
New Hampshire .....	-	-	-	-	-	-	1	-	-	4	15
Vermont .....	-	-	5	-	-	-	-	-	-	1	8
Massachusetts .....	1	-	46	-	1	1	2	-	1	35	39
Rhode Island .....	7	-	12	-	2	-	-	-	-	6	6
Connecticut .....	1	-	10	-	-	-	-	-	1	4	16
MIDDLE ATLANTIC .....	22	-	35	-	-	5	5	2	39	109	111
Upstate New York .....	1	-	1	-	-	1	3	1	4	28	33
New York City .....	1	-	34	-	-	-	-	-	19	29	36
New Jersey .....	17	-	NN	-	-	4	2	-	7	40	42
Pennsylvania .....	3	-	-	-	-	-	-	1	9	12	-
EAST NORTH CENTRAL .....	49	-	152	-	-	14	1	-	24	150	116
Ohio *	29	-	16	-	-	10	-	-	4	17	17
Indiana .....	4	-	7	-	-	-	1	-	-	17	5
Illinois .....	3	-	-	-	-	-	-	-	10	41	31
Michigan .....	13	-	36	-	-	4	-	-	9	63	55
Wisconsin .....	-	-	93	-	-	-	-	-	1	12	8
WEST NORTH CENTRAL .....	3	-	45	-	7	1	-	-	-	53	28
Minnesota .....	-	-	-	-	-	-	-	-	-	5	-
Iowa .....	3	-	4	-	-	-	-	-	-	12	-
Missouri .....	-	-	28	-	-	-	-	-	-	20	13
North Dakota .....	-	-	13	-	-	1	-	-	-	-	-
South Dakota .....	-	-	-	-	7	-	-	-	-	-	1
Nebraska .....	-	-	-	-	-	-	-	-	-	-	-
Kansas .....	-	-	-	-	-	-	-	-	-	16	14
SOUTH ATLANTIC .....	26	-	37	-	-	1	3	-	11	115	141
Delaware .....	-	-	-	-	-	-	-	-	-	-	-
Maryland .....	7	-	-	-	-	-	1	-	6	14	43
District of Columbia .....	2	-	2	-	-	-	-	-	-	1	2
Virginia .....	6	-	1	-	-	-	1	-	3	14	16
West Virginia *	4	-	25	-	-	1	-	-	1	3	5
North Carolina .....	4	-	NN	-	-	-	-	-	-	31	23
South Carolina .....	1	-	9	-	-	-	-	-	-	7	4
Georgia .....	-	-	-	-	-	-	-	-	-	8	5
Florida .....	2	-	-	-	-	-	1	-	1	37	43
EAST SOUTH CENTRAL .....	6	-	10	-	-	2	2	-	10	71	43
Kentucky .....	1	-	9	-	-	-	-	-	1	10	7
Tennessee .....	4	-	NN	-	-	1	1	-	4	47	29
Alabama *	1	-	1	-	-	1	1	-	3	9	5
Mississippi .....	-	-	-	-	-	-	-	-	2	5	2
WEST SOUTH CENTRAL .....	17	1	27	-	9	10	4	-	12	136	116
Arkansas *	-	-	-	-	-	-	2	-	-	1	6
Louisiana .....	1	-	NN	-	-	-	1	-	5	9	16
Oklahoma .....	10	-	6	-	-	9	-	-	-	25	17
Texas .....	6	1	21	-	9	1	1	-	7	101	77
MOUNTAIN .....	4	-	35	-	7	-	1	-	1	28	40
Montana .....	1	-	7	-	-	-	1	-	-	3	11
Idaho .....	3	-	-	-	-	-	-	-	-	2	5
Wyoming .....	-	-	7	-	-	-	-	-	-	2	-
Colorado *	-	-	10	-	-	-	-	-	1	17	-
New Mexico .....	-	-	11	-	6	-	-	-	-	1	5
Arizona *	-	-	-	-	1	-	-	-	-	-	13
Utah .....	-	-	-	-	-	-	-	-	-	3	5
Nevada .....	-	-	-	-	-	-	-	-	-	-	1
PACIFIC .....	44	1	35	-	78	8	6	1	69	198	194
Washington .....	2	-	11	-	70	-	-	-	4	27	37
Oregon .....	-	-	-	-	3	-	-	-	4	13	35
California .....	42	1	-	-	3	8	6	1	59	155	119
Alaska .....	-	-	7	-	2	-	-	-	2	-	2
Hawaii .....	-	-	17	-	-	-	-	-	-	3	1
Guam *	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	-	9	-	-	-	-	-	-	7	46
Virgin Islands .....	-	-	2	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: W. Va. 2  
Chickenpox: Me. 1, Guam 2Hepatitis B: Ala. 1, Ariz. 1, Guam 2  
Hepatitis A: Me. 3, Ohio delete 2, Ark. 3, Colo. 17, Ariz. 17

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING AUGUST 4, 1973 AND AUGUST 5, 1972 (31st WEEK) — Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	2	142	147	23,594	26,136	14	968	921	542	53,431	141	25,467
NEW ENGLAND .....	—	12	14	7,346	3,027	—	44	38	28	2,703	40	3,580
Maine *	—	—	—	64	243	—	1	3	3	299	—	68
New Hampshire .....	—	—	1	856	227	—	6	3	—	177	—	353
Vermont .....	—	2	—	118	125	—	2	—	—	241	—	43
Massachusetts .....	—	6	8	3,909	648	—	12	18	11	801	34	2,031
Rhode Island .....	—	—	1	603	519	—	3	10	9	310	1	210
Connecticut .....	—	4	4	1,796	1,265	—	20	4	5	875	5	875
MIDDLE ATLANTIC .....	—	21	40	2,352	909	2	129	116	78	6,959	5	4,134
Upstate New York *	—	12	7	780	124	1	46	30	NN	NN	1	407
New York City .....	—	1	8	859	246	—	26	35	71	4,325	4	445
New Jersey *	—	4	5	382	484	1	29	24	4	1,467	—	2,996
Pennsylvania .....	—	4	20	331	55	—	28	27	3	1,167	—	286
EAST NORTH CENTRAL .....	1	20	52	8,314	10,784	—	125	130	108	13,868	35	5,767
Ohio .....	1	4	—	278	233	—	56	53	17	2,631	5	675
Indiana .....	—	3	4	617	1,222	—	4	11	10	1,144	6	923
Illinois .....	—	10	17	2,004	3,996	—	24	25	21	2,337	4	907
Michigan .....	—	3	20	4,302	1,958	—	36	35	19	3,854	12	1,781
Wisconsin .....	—	—	11	1,113	3,375	—	5	6	41	3,902	8	1,481
WEST NORTH CENTRAL .....	—	5	3	434	925	1	75	68	51	4,559	5	1,194
Minnesota .....	—	1	—	19	19	—	6	19	1	77	—	218
Iowa .....	—	—	—	276	648	—	17	2	3	2,787	—	184
Missouri .....	—	1	1	49	162	—	31	20	44	658	5	259
North Dakota .....	—	1	2	58	51	—	3	—	—	64	—	276
South Dakota .....	—	—	—	—	6	—	4	2	—	17	—	23
Nebraska .....	—	1	—	5	18	1	7	9	3	120	—	139
Kansas .....	—	1	—	27	21	—	7	16	—	836	—	95
SOUTH ATLANTIC .....	1	22	9	1,175	2,088	1	159	208	48	6,273	24	2,064
Delaware .....	—	—	—	8	48	—	—	1	4	258	—	12
Maryland *	—	2	—	12	15	—	22	33	4	609	—	10
District of Columbia .....	—	1	—	5	2	—	4	9	6	87	—	3
Virginia .....	—	5	1	410	59	—	29	47	1	662	4	620
West Virginia .....	—	—	4	190	258	—	2	7	23	2,184	14	281
North Carolina .....	1	6	—	4	32	—	35	26	NN	NN	1	201
South Carolina .....	—	1	1	57	214	—	10	20	1	348	3	84
Georgia .....	—	3	—	147	164	—	20	8	—	26	—	11
Florida .....	—	4	3	342	1,296	1	37	57	9	2,099	2	842
EAST SOUTH CENTRAL .....	—	5	—	587	1,020	2	91	75	73	4,307	13	1,256
Kentucky .....	—	1	—	363	518	1	32	24	3	1,271	4	380
Tennessee .....	—	—	—	165	191	1	37	28	49	1,977	5	500
Alabama .....	—	4	—	5	131	—	15	15	21	605	1	184
Mississippi .....	—	—	—	54	180	—	7	8	—	454	3	192
WEST SOUTH CENTRAL .....	—	9	4	633	1,402	5	152	113	62	3,520	5	1,420
Arkansas .....	—	—	—	69	13	—	13	9	4	344	—	112
Louisiana .....	—	2	—	83	82	—	30	34	1	70	—	100
Oklahoma .....	—	1	—	51	10	2	27	6	11	420	—	175
Texas .....	—	6	4	430	1,297	3	82	64	46	2,686	5	1,033
MOUNTAIN .....	—	9	7	575	1,737	—	29	16	13	2,386	3	2,348
Montana .....	—	1	1	16	12	—	6	2	—	221	—	499
Idaho .....	—	—	1	247	24	—	4	4	—	110	—	33
Wyoming .....	—	—	2	79	51	—	—	1	2	420	1	6
Colorado .....	—	2	2	102	517	—	9	3	9	415	1	1,536
New Mexico .....	—	2	—	112	113	—	3	2	2	951	—	186
Arizona .....	—	4	—	16	867	—	3	1	—	140	—	17
Utah .....	—	—	1	2	153	—	2	2	—	121	1	68
Nevada .....	—	—	—	1	—	—	2	1	—	8	—	3
PACIFIC .....	—	39	18	2,178	4,244	3	164	157	81	8,856	11	3,704
Washington .....	—	3	4	1,000	972	—	17	12	1	1,406	—	651
Oregon .....	—	2	3	452	113	—	12	13	16	1,639	4	772
California .....	—	31	11	643	3,053	3	129	123	58	4,894	7	2,246
Alaska .....	—	2	—	65	11	—	6	6	3	675	—	9
Hawaii .....	—	1	—	18	95	—	—	3	3	242	—	26
Guam *	—	—	—	26	8	—	—	11	—	17	—	8
Puerto Rico *	—	—	6	1,717	568	—	7	4	11	636	—	26
Virgin Islands .....	—	—	—	—	1	—	—	2	3	20	—	2

\*Delayed reports: Malaria: Md. delete 1  
Measles: N. J. delete 2, Guam 6, P. R. 10

Mumps: Me. 8, Guam 1  
Rubella: N. Y. Ups. 21

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING AUGUST 4, 1973 AND AUGUST 5, 1972 (31st WEEK) – Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES .....	49	541	18,928	88	11	425	26	407	17,493	474	72	2,217
NEW ENGLAND .....	2	16	661	—	—	6	—	1	490	9	1	93
Maine .....	—	—	50	—	—	—	—	—	47	—	—	53
New Hampshire .....	—	—	37	—	—	—	—	—	7	1	1	32
Vermont .....	—	—	18	—	—	—	—	—	5	—	—	3
Massachusetts .....	—	8	353	—	—	6	—	1	235	3	—	4
Rhode Island .....	1	—	45	—	—	—	—	—	53	—	—	—
Connecticut .....	1	8	158	—	—	—	—	—	143	5	—	1
MIDDLE ATLANTIC .....	7	96	3,713	—	2	40	1	22	3,066	96	1	20
Upstate New York .....	1	24	674	—	—	6	1	10	849	6	1	10
New York City .....	3	25	1,399	—	—	14	—	1	1,251	68	—	—
New Jersey .....	2	18	640	—	2	12	—	5	350	15	—	—
Pennsylvania .....	1	29	1,000	—	—	8	—	6	616	7	—	10
EAST NORTH CENTRAL .....	7	75	2,888	2	—	22	—	17	1,990	28	14	211
Ohio *. .....	1	12	862	—	—	9	—	13	599	6	3	29
Indiana .....	—	4	371	—	—	—	—	—	282	3	1	47
Illinois .....	3	36	885	—	—	5	—	4	298	1	2	56
Michigan .....	1	23	693	2	—	6	—	—	642	11	1	4
Wisconsin .....	2	—	77	—	—	2	—	—	169	7	7	75
WEST NORTH CENTRAL .....	4	16	759	10	2	15	1	14	700	5	24	715
Minnesota .....	—	6	91	—	—	4	—	—	216	2	9	243
Iowa .....	—	1	82	—	—	—	1	7	6	1	2	146
Missouri .....	3	5	352	10	2	9	—	6	221	2	4	66
North Dakota .....	1	1	28	—	—	—	—	—	17	—	4	117
South Dakota .....	—	1	52	—	—	1	—	—	26	—	—	77
Nebraska .....	—	1	48	—	—	1	—	1	47	—	—	3
Kansas .....	—	1	106	—	—	—	—	—	167	—	5	63
SOUTH ATLANTIC .....	8	109	3,748	6	2	227	15	198	4,216	170	9	181
Delaware .....	—	—	50	—	—	—	—	7	72	3	1	3
Maryland .....	—	15	400	—	—	6	1	8	296	20	—	9
District of Columbia .....	—	6	172	—	—	—	—	—	383	11	—	—
Virginia .....	2	12	490	1	2	3	4	43	450	32	2	55
West Virginia .....	—	4	176	—	—	2	—	1	50	2	—	18
North Carolina .....	—	16	594	1	—	4	6	82	599	11	—	1
South Carolina .....	—	17	340	—	—	4	—	26	607	31	—	3
Georgia .....	1	13	623	3	—	1	4	31	677	7	5	60
Florida .....	5	26	963	1	—	207	—	—	1,082	53	1	32
EAST SOUTH CENTRAL .....	7	56	1,714	6	1	18	6	65	1,288	20	1	344
Kentucky .....	1	11	396	1	1	3	—	—	129	4	1	188
Tennessee .....	4	25	539	4	—	8	3	30	635	10	—	119
Alabama .....	2	8	451	—	—	2	—	9	324	—	—	37
Mississippi *. .....	—	12	328	1	—	5	3	26	200	6	—	—
WEST SOUTH CENTRAL .....	8	57	1,920	62	2	20	2	76	2,127	50	8	419
Arkansas *. .....	—	12	230	43	—	3	—	12	101	5	1	89
Louisiana *. .....	3	9	304	—	—	6	—	—	526	13	—	33
Oklahoma .....	3	—	163	17	—	2	2	62	162	6	1	133
Texas *. .....	2	36	1,223	2	2	9	—	2	1,338	26	6	164
MOUNTAIN .....	—	14	608	1	1	7	1	7	630	13	—	19
Montana .....	—	—	29	—	—	—	—	—	22	—	—	—
Idaho .....	—	1	26	—	—	—	1	2	37	—	—	—
Wyoming .....	—	—	11	—	—	1	—	1	26	2	—	—
Colorado .....	—	—	114	—	—	1	—	1	232	7	—	—
New Mexico .....	—	9	139	1	1	2	—	3	106	—	—	2
Arizona .....	—	—	226	—	—	3	—	—	132	3	—	17
Utah .....	—	4	25	—	—	—	—	—	37	1	—	—
Nevada .....	—	—	38	—	—	—	—	—	38	—	—	—
PACIFIC .....	6	102	2,917	1	1	70	—	7	2,986	83	14	215
Washington .....	2	8	240	—	—	6	—	4	224	3	1	3
Oregon .....	1	8	163	—	—	2	—	2	223	—	1	3
California .....	3	79	2,274	1	1	61	—	1	2,435	79	12	202
Alaska .....	—	—	67	—	—	—	—	—	58	—	—	7
Hawaii .....	—	7	173	—	—	1	—	—	46	1	—	—
Guam *. .....	—	—	28	—	—	—	—	—	—	—	—	—
Puerto Rico .....	4	4	289	—	—	3	—	—	8	2	5	34
Virgin Islands .....	—	1	1	—	—	—	—	—	1	1	—	—

\*Delayed reports: TB: Ohio delete 3  
Tularemia: Ark. 3  
RMSR: Miss. 4

Gonorrhea: Guam 8  
Syphilis: La. delete 1  
Rabies: Tex. 4

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING AUGUST 4, 1973

Week No.

31

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	674	402	22	27	SOUTH ATLANTIC	1,257	658	44	51
Boston, Mass.	223	113	7	13	Atlanta, Ga.	155	80	6	8
Bridgeport, Conn.	43	28	—	—	Baltimore, Md.	219	127	8	2
Cambridge, Mass.	24	21	1	5	Charlotte, N. C.	51	27	4	—
Fall River, Mass.	31	22	—	—	Jacksonville, Fla.	87	44	2	1
Hartford, Conn.	51	29	4	—	Miami, Fla.	149	68	4	3
Lowell, Mass.	26	19	1	—	Norfolk, Va.	79	27	4	8
Lynn, Mass.	17	11	—	1	Richmond, Va.	97	50	1	6
New Bedford, Mass.	21	13	—	1	Savannah, Ga.	37	18	—	1
New Haven, Conn.	59	33	5	—	St. Petersburg, Fla.	92	71	3	3
Providence, R. I.	45	30	—	4	Tampa, Fla.	82	38	6	5
Somerville, Mass.	9	6	—	1	Washington, D. C.	174	90	6	9
Springfield, Mass.	40	23	1	1	Wilmington, Del.	35	18	—	5
Waterbury, Conn.	30	20	1	—	EAST SOUTH CENTRAL	622	370	23	15
Worcester, Mass.	55	34	2	1	Birmingham, Ala.	93	55	1	1
MIDDLE ATLANTIC	3,088	1,842	96	147	Chattanooga, Tenn.	38	24	1	—
Albany, N. Y.	49	25	4	—	Knoxville, Tenn.	57	36	1	1
Allentown, Pa.	24	15	—	2	Louisville, Ky.	96	61	7	10
Buffalo, N. Y.	145	90	4	13	Memphis, Tenn.	155	91	6	—
Camden, N. J.	43	26	4	1	Mobile, Ala.	55	33	2	—
Elizabeth, N. J.	29	18	—	1	Montgomery, Ala. *	37	22	1	2
Erie, Pa.	35	22	2	4	Nashville, Tenn.	91	48	4	1
Jersey City, N. J.	63	36	—	3	WEST SOUTH CENTRAL	1,314	701	56	26
Newark, N. J.	59	29	3	6	Austin, Tex.	74	38	2	1
New York City, N. Y. †	1,467	897	38	64	Baton Rouge, La.	49	25	1	1
Paterson, N. J.	35	19	4	3	Corpus Christi, Tex.	42	24	4	—
Philadelphia, Pa.	600	336	28	22	Dallas, Tex.	174	86	6	—
Pittsburgh, Pa.	194	104	3	10	El Paso, Tex.	29	14	3	3
Reading, Pa.	37	26	—	3	Fort Worth, Tex.	82	54	1	1
Rochester, N. Y.	98	69	1	4	Houston, Tex.	305	156	14	3
Schenectady, N. Y.	24	13	1	1	Little Rock, Ark.	62	30	2	4
Scranton, Pa.	30	20	—	—	New Orleans, La.	156	77	12	3
Syracuse, N. Y.	79	51	2	1	Oklahoma City, Okla. *	92	53	4	1
Trenton, N. J.	30	18	1	4	San Antonio, Tex.	133	71	5	3
Utica, N. Y.	26	16	—	4	Shreveport, La.	67	37	1	4
Yonkers, N. Y.	21	12	1	1	Tulsa, Okla.	49	36	1	2
EAST NORTH CENTRAL	2,359	1,272	115	64	MOUNTAIN	482	263	29	12
Akron, Ohio	67	44	1	—	Albuquerque, N. Mex.	44	15	4	5
Canton, Ohio	48	27	2	—	Colorado Springs, Colo.	27	13	3	3
Chicago, Ill.	597	313	26	13	Denver, Colo.	107	64	2	—
Cincinnati, Ohio	162	95	6	4	Las Vegas, Nev.	55	27	3	—
Cleveland, Ohio	205	99	12	3	Ogden, Utah	16	12	1	—
Columbus, Ohio	136	63	4	2	Phoenix, Ariz.	95	48	6	2
Dayton, Ohio	77	40	3	1	Pueblo, Colo.	23	12	—	1
Detroit, Mich.	302	145	18	9	Salt Lake City, Utah	60	31	7	—
Evansville, Ind.	35	25	3	4	Tucson, Ariz.	55	41	3	1
Fort Wayne, Ind.	28	17	1	—	PACIFIC	1,679	1,045	57	37
Gary, Ind.	30	16	4	4	Berkeley, Calif.	13	10	—	—
Grand Rapids, Mich.	47	31	2	4	Fresno, Calif.	56	30	2	2
Indianapolis, Ind.	152	82	8	2	Glendale, Calif.	39	34	1	1
Madison, Wis.	32	12	5	3	Honolulu, Hawaii *	54	30	4	1
Milwaukee, Wis.	134	86	5	5	Long Beach, Calif.	120	80	2	3
Peoria, Ill.	52	32	4	3	Los Angeles, Calif.	542	340	13	11
Rockford, Ill.	35	18	1	1	Oakland, Calif.	75	48	3	1
South Bend, Ind.	43	24	2	3	Pasadena, Calif.	28	17	—	1
Toledo, Ohio	118	71	6	3	Portland, Oreg.	157	95	8	2
Youngstown, Ohio	59	32	2	—	Sacramento, Calif.	65	36	2	1
WEST NORTH CENTRAL	799	475	42	35	San Diego, Calif.	110	59	11	—
Des Moines, Iowa	47	31	3	—	San Francisco, Calif.	167	112	7	5
Duluth, Minn.	32	25	1	2	San Jose, Calif.	36	28	—	—
Kansas City, Kans.	25	12	3	1	Seattle, Wash.	133	78	4	5
Kansas City, Mo.	115	71	6	1	Spokane, Wash.	45	26	—	1
Lincoln, Nebr.	39	27	2	4	Tacoma, Wash.	39	22	—	3
Minneapolis, Minn.	98	55	4	2	Total	12,274	7,028	484	415
Omaha, Nebr.	93	50	5	—	Expected Number	12,156	6,873	550	392
St. Louis, Mo.	211	116	12	12	Cumulative Total (includes reported corrections for previous weeks)	404,985	238,745	15,021	16,896
St. Paul, Minn.	60	42	1	3					
Wichita, Kans.	79	46	5	11					

†Delayed report for week ending July 28, 1973

\*Estimate based on average percent of divisional total

## TICK PARALYSIS — Mississippi, Oklahoma, Virginia

In June 1973, 3 cases of tick paralysis were reported to CDC from Oklahoma, Mississippi, and Virginia; each is summarized below.

**Oklahoma:** In June 1973, a previously healthy 3-year-old girl from Oklahoma awoke unable to walk. Her legs were weak, and she could not stand without assistance. Later that day, she had truncal and upper extremity ataxia and weakness. En route to their family physician, her parents discovered an engorged tick on the child's scalp and removed it. Physical examination an hour later revealed quadriparesis, but deep tendon reflexes, sensory examination, and mentation were normal. She was afebrile and had no history of nausea, vomiting, pain, or recent respiratory or gastrointestinal infections. Several hours after the tick had been removed, the girl was markedly improved and ambulatory. She subsequently made a complete recovery. The tick was identified by the Oklahoma State Department of Health as *Dermacentor variabilis*, commonly called the dog tick.

(Reported by Stanley W. Ferguson, Ph.D., State Epidemiologist, Oklahoma State Department of Health; and an EIS Officer.)

**Mississippi:** On June 1, 1973, a 4-year-old boy from Mississippi awoke unable to move his extremities or talk. As in the case in Oklahoma, there was no prior history of a recent infection, fever, pain, or diarrhea. On the way to the hospital, his parents removed 2 ticks from the child's scalp. Upon arrival, the boy was afebrile. A complete blood cell count was normal, and a lumbar puncture, though traumatic, showed a normal pressure. Quadriparesis was present, but he was alert. Within an hour after removal of the ticks, the child was markedly improved and could move all 4 extremities and talk. Over the next 24 hours, he recovered completely. The 2 ticks were subsequently identified by an entomologist from Mississippi State University as a male *D. variabilis* and an engorged pregnant female tick of the same species.

(Reported by James Grotta, M.D., USPHS Indian Hospital, Philadelphia, Mississippi; B. R. Norment, Ph.D., Department of Entomology, Mississippi State University; Durward L. Blakey, M.D., State Epidemiologist, Division of Preventable Disease Control, Mississippi State Board of Health; and an EIS Officer.)

**Virginia:** In June 1973, a 19-year-old girl from Virginia had abrupt onset of paresthesia in the distal extremities and incoordination upon walking. The next morning she could not get out of bed without assistance. Following her admission to a local hospital, physical examination revealed profound symmetrical weakness of the lower extremities and ataxic movements. There was no fever. Sensory examination, cranial nerves, and deep tendon reflexes were normal. Over the next 48 hours, weakness progressed to the upper extremities, and deep tendon reflexes could no longer be elicited. Breathing became labored. A complete blood cell count, electrolytes, and cerebrospinal fluid examination were repeatedly normal. An engorged female tick, *D. variabilis*, was subsequently dis-

covered in the right posterior temporal area and removed. Within 6 hours, the patient was markedly stronger and within 48 hours had completely recovered.

(Reported by Emerson Farley, M.D., private physician, Retreat for the Sick Hospital, Richmond, Virginia; George H. Agate, M.D., Director, Henrico County Health Department; Karl A. Western, M.D., Director, Preventive Medical Services, Virginia State Department of Health; and an EIS Officer.)

## Editorial Note

Tick paralysis or tick toxicosis was first described in 1824, in farm animals in Australia (1). The first human case was reported from British Columbia in the late 19th century (2); in 1912 the first case in the United States was reported from Oregon. Worldwide, a variety of ticks can cause this disease, but only the wood tick (*Dermacentor andersoni*) and the dog tick (*D. variabilis*) have been responsible for documented cases in this country.

An estimated 150 cases have been reported in the United States, with a 10-12% case-fatality ratio. The majority of the cases have occurred in the northwest and along the eastern coast. Children, due to their greater exposure to tick-infested areas, are more frequently affected than adults. The disease is more common in females, probably due to their longer hair, which obscures the feeding tick and makes difficult its detection in the scalp.

The syndrome of tick paralysis is quite characteristic (3). In general, the tick must be attached for at least 4 days before symptoms begin. Initially, incoordination and ataxia are common in the lower extremities, followed by rapidly progressive symmetrical ascending flaccid paralysis. Paresthesia may occasionally be the first symptom noted. Death may result from bulbar paralysis and respiratory impairment in unrecognized cases. The white blood cell count, cerebrospinal fluid examination, and electroencephalogram are normal. Symptoms subside within several hours after removal of the tick, with complete recovery within 48 hours.

The illness is thought to be mediated by a toxin in the tick's saliva elaborated only by the female (4). The mode of action of the toxin has not been completely defined, but several investigators have demonstrated a block at the myoneuronal junction (5). In addition, a decreased motor nerve conduction velocity has been demonstrated by electromyography (6).

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## PROBABLE SCOMBROID FISH POISONING — Mississippi

On August 2, 1973, 30 of 298 children attending a day care center in Jackson, Mississippi, had the sudden onset of a pruritic maculopapular rash 15 minutes after beginning lunch. Three children had urticarial lesions on the head and neck,

and another developed periorbital edema. No vomiting occurred. Symptoms lasted from 15 minutes to 2 1/2 hours. Several children saw local physicians, but none required hospitalization.

## SCOMBROID FISH POISONING – Continued

The children ate lunch in small groups divided by age. At approximately 10:30 a.m. on August 2, 3 groups (ages 11-13 months, 14 months-2 years, and 2-3 years) began to eat. Fifteen minutes later, a pruritic erythematous maculopapular rash began to appear which subsequently affected 10 of 11 children in the youngest age group, 13 of 17 in the middle group, and 7 of 20 in the oldest group.

Lunch consisted of tuna casserole, string beans, banana pudding, bread, milk, and grape juice. Investigation revealed that all 30 children who became ill had eaten the tuna casserole. The 1 child in the youngest age group who did not eat the casserole did not become ill. Suspecting that the tuna casserole was responsible for the illness, the staff did not serve it to the older children who ate later. These children experienced no illness. Seven adults who ate the casserole remained well and reported that the casserole looked and tasted normal.

The casserole was prepared on the morning of August 2 in the school kitchen from cans of commercially packaged tuna fish, cream of mushroom and cream of celery soup, and spices and was served hot within minutes after preparation. Cultures of specimens performed by the Mississippi Public Health Laboratory from an opened can of tuna used to prepare the casserole and from an unopened can of tuna incubated at

37°C were sterile. Cultures of the remaining tuna casserole grew only a few colonies of diphtheroids. Analysis of the tuna casserole and of tuna from an open can by U.S. Food and Drug Administration Laboratories revealed no detectable histamine. Cans in the remaining 59 cases of the lot appeared normal. Additional studies are in progress.

(Reported by Will Ratliff, Sanitarian, Eric McVey, M.D., Director, Hinds County Health Department; Emily Jumper, Microbiologist, Richard Andrews, M.S., Director, Mississippi Public Health Laboratory; Durward L. Blakey, M.D., State Epidemiologist, Division of Preventable Disease Control, Mississippi State Board of Health; U.S. Food and Drug Administration; and an EIS Officer.)

## Editorial Note

Although no histamine was detected in the tuna casserole or the remaining tuna fish in the opened can, the incubation period and clinical manifestations of this illness are compatible with scombroid fish poisoning.

## Erratum, Vol. 22, No. 30, p. 256

In the article "Follow-up on Relapsing Fever – Arizona," 2nd paragraph, 2nd line, correct the trade name to read Baygon; in the footnote correct the generic name to read 2% o-isopropoxyphenyl-n-methylcarbamate.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to:

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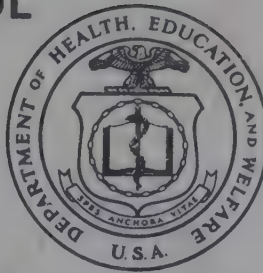
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# Morbidity and Mortality



Vol. 22, No. 32

WEEKLY  
REPORT

For  
Week Ending  
August 11, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE

DATE OF RELEASE: AUGUST 17, 1973 - ATLANTA, GEORGIA 30333

## EPIDEMIOLOGIC NOTES AND REPORTS NOSOCOMIAL *PSEUDOMONAS SPP.* BACTEREMIAS Maryland

On August 2, 1973, 10 cases of *Pseudomonas spp.* bacteremia were reported to CDC's National Nosocomial Infections Study. These cases had occurred in trauma and surgical patients in the University of Maryland Hospital, Baltimore, Maryland, between May 22 and June 30, 1973. A preliminary analysis of the data by infection control personnel at the hospital had indicated a possible association of cases with aminoglycoside administration. The organism grew slowly in blood culture and was difficult to maintain on sub-cultures. The gram-negative isolates from blood cultures of patients were reported to produce alkaline over alkaline or neutral reactions on triple sugar iron slants, had positive oxidase reactions, failed to ferment glucose, and grew slowly on MacConkey's and blood agar media. Sensitivity testing by

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disc technique showed susceptibility to chloramphenicol and tetracycline but resistance to other tested agents. No viable isolates are presently available for future study.

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	32nd WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 32 WEEKS		
	August 11, 1973	August 12, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis . . . . .	190	136	186	2,023	1,607	1,607
Brucellosis . . . . .	10	3	3	119	105	126
Chickenpox . . . . .	344	610	— — —	143,920	112,683	— — —
Diphtheria . . . . .	2	2	2	113	62	98
Encephalitis, primary:						
Arthropod-borne and unspecified . . . . .	50	18	33	774	533	641
Encephalitis, post-infectious . . . . .	8	4	7	193	191	256
Hepatitis, serum (Hepatitis B) . . . . .	136	169	158	4,857	5,669	4,392
Hepatitis, infectious (Hepatitis A) . . . . .	965	1,060	1,018	31,038	33,971	33,971
Malaria . . . . .	7	7	46	149	645	1,684
Measles (rubeola) . . . . .	123	213	213	23,718	26,349	26,349
Meningococcal infections, total . . . . .	16	21	29	984	942	1,742
Civilian . . . . .	16	20	27	960	905	1,565
Military . . . . .	—	1	2	24	37	177
Mumps . . . . .	459	462	588	53,897	55,294	73,295
Rubella (German measles) . . . . .	98	164	261	25,564	20,122	42,505
Tetanus . . . . .	1	2	4	50	71	71
Tuberculosis, new active . . . . .	658	667	— — —	19,578	20,629	— — —
Tularemia . . . . .	4	6	1	93	83	88
Typhoid fever . . . . .	13	12	9	439	197	187
Typhus, tick-borne (Rky. Mt. spotted fever) . . . . .	27	27	27	435	327	259
Venereal Diseases:						
Gonorrhea . . . . .	16,527	16,433	— — —	491,002	439,464	— — —
Syphilis, primary and secondary . . . . .	500	555	— — —	16,034	14,952	— — —
Rabies in animals . . . . .	75	82	64	2,294	2,715	2,273

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax: . . . . .	1	Poliomyelitis, total: . . . . .	3
Botulism: . . . . .	13	Paralytic: . . . . .	3
Congenital rubella syndrome: Va.-1 . . . . .	19	Psittacosis: Tex.-1 . . . . .	13
Leprosy: Calif.-3, N.J.-1, Tex.-1 . . . . .	77	Rabies in man: . . . . .	—
Leptospirosis: . . . . .	20	Trichinosis: NYC-1 . . . . .	64
Plague: . . . . .	1	Typhus, murine: Tex.-1 . . . . .	25

**BACTEREMIAS — Continued**

Epidemiologic analysis showed a statistically significant association between these blood isolates and infusion of normal, human, salt-poor, serum albumin (Probumin-25%, Lederle Laboratories Division, American Cyanamid Company). Compared with matched control populations, affected patients had no other significant common-source exposure. One patient developed signs of gram-negative septicemia within 15 minutes after initiation of albumin infusion. The physicians caring for this patient obtained cultures of blood and infusion fluid and recorded the identifying number, 350-322, on the bottle of the albumin given to the patient. The blood culture yielded the above organism, but the small sample of albumin which had been cultured in a media poorly suited for growth of this organism was negative.

Seventy units of albumin, each containing 50 cc of the implicated lot, were found in the hospital. An additional 105 units have been recovered unused from other institutions that received that lot. Separate cultures of the albumin and stopper of 1 of 54 bottles on test for 2 days have revealed a yet unidentified gram-negative rod. Antibiotic susceptibility tests, which have been completed only on the isolate from the culture of the stopper, revealed sensitivity only to tetracycline, chloramphenicol, and naladixic acid—the latter was not tested

at the hospital.

(Reported by Mary Ellen Dunne, R.N., Sandra Polakavetz, Infection Control Officers, William G. Armiger, M.D., Anthony Raneri, M.D., Surgical Residents, University of Maryland Hospital, Baltimore, Maryland; Merrill J. Snyder, Ph.D., Division of Infectious Diseases, School of Medicine, University of Maryland; John D. Stafford, M.D., Chief, Division of Communicable Diseases, Preventive Medicine Administration, Maryland Department of Health and Mental Hygiene; Bureau of Biologics, Food and Drug Administration, Washington, D.C.; and the Bacterial Diseases Branch, Bureau of Epidemiology, CDC.)

**Editorial Note**

Epidemiologic and preliminary microbiologic data strongly suggest intrinsic contamination of this lot of commercially-prepared normal serum albumin. It should be pointed out that the number 350-322 represents 1 of 4 different identifying numbers given to a particular lot of this product. The other numbers are 350-125, 348-200, and 347-232. All hospitals that received shipments of the implicated lot of albumin have been contacted and all available unused vials of the suspect lot have been placed in quarantine. Further epidemiologic and microbiologic studies of the product are underway.

**HUMAN PLAGUE — New Mexico, Texas**

On June 2, 1973, a 64-year-old resident of Lincoln, New Mexico, traveling through Brownfield, Texas, became ill with fever and general malaise. The following day he was admitted to a Brownfield hospital with a temperature of 103°F, nausea, weakness, and lower extremity myalgia. No lymphadenopathy or abnormal lung findings were apparent. On the second day of hospitalization, blood specimens were positive for gram-negative organisms, and the patient was begun on chloramphenicol and gentamicin. Identification of *Yersinia pestis* was performed by the CDC Bureau of Laboratories.

The patient's general condition improved rapidly following antibiotic therapy, although fever persisted for 10 days; his clinical course was punctuated by an episode of pulmonary edema. Persistent pulmonary infiltrates were thought to be related to congestive heart failure rather than to true plague pneumonia. He was discharged after a 2-week hospitalization and is presently asymptomatic.

Epidemiologic investigation by the Texas State Department of Health revealed that the patient had spent most of the previous month at his brother's ranch in Lincoln, New Mexico, where he had handled dead mice; he did not recall being bitten by fleas. During the 2 days immediately preceding his illness, the patient had been traveling in Texas. He spent 1 night on a ranch in Plano, Texas, but had no contact with rodents there.

Sylvatic plague has been reported in most New Mexico counties in recent years, but not from the Plano, Texas, vicinity. The last human case in the Lincoln, New Mexico, area was reported in 1949. Rodent and insect vector investigations are now underway in Lincoln, New Mexico, and Plano, Texas.

(Reported by Noah Stone, M.D., private physician, Brownfield, Texas; Myron Mattison, M.D., private physician, Lubbock, Texas; M. S. Dickerson, M.D., State Epidemiologist, R. F. Sowell, Jr., M.D., Medical Consultant, Texas State Department of Health; Hazel English, County Health Nurse, Lincoln, New Mexico; Neil Weber, Program Manager, Insect and Rodent Control Section, Environmental Improvement Agency, New Mexico; David Farrell, Acting Director, New Mexico State Health Agency; the Plague Section, Vector-borne Diseases Branch, Fort Collins, Colorado, the Special Bacteriology Unit, Clinical Bacteriology Section, Bacteriology Branch, Bureau of Laboratories, CDC; and an EIS Officer.)

**Editorial Note**

On the basis of the usual 2- to 7-day incubation period in humans and this patient's history of animal contact, it is assumed that he was exposed to plague in New Mexico. This is the second case of human plague reported in the United States this year; the first was reported in Payson, Arizona, in July (MMWR, Vol. 22, No. 30).

**TULAREMIA — Oklahoma, Missouri**

Seven cases of tularemia have recently been reported to CDC—4 among fishing companions in Oklahoma and 3 among family members in Missouri. The clinical histories and the epidemiologic investigations of these cases are described below:

**Oklahoma**

**Case 1:** On April 9, 1973, a 24-year-old man in Oklahoma became ill with a high temperature, backache, and sore throat

which lasted for 3 days. He did not seek medical attention or report for serologic testing.

**Case 2:** On April 10, a 43-year-old man had the abrupt onset of fever (temperature 103°F) and frontal headache and noted a weeping lesion on his right palm. Two days later he complained of a tender lump in the right axillary region. Because of continued fever and progressive weakness, he was hospitalized on April 18. A chest X-ray revealed bilateral patchy

infiltrates. His fever defervesced following treatment with streptomycin and tetracycline, and a chest X-ray on May 31 showed complete resolution of the pulmonary infiltrate.

**Case 3:** On April 11, a 23-year-old man had the sudden onset of fever, headache, and mild, right-sided pleuritic pain. Physical examination revealed bilateral cervical lymphadenopathy but no ulcerative skin lesions. On May 21, he was hospitalized for an unrelated problem, and a chest X-ray showed an infiltrate surrounding a 1 cm x 1 1/2 cm cavitory lesion in the right upper lobe and right-sided hilar adenopathy. Sputum examinations were negative for acid-fast bacilli, and an intermediate strength tuberculin skin test was negative. The patient has not taken tetracycline as prescribed by his physician; a chest X-ray on July 5 showed minimal resolution of the cavitory lesion.

**Case 4:** This 27-year-old man developed sore throat, fever, headache, and muscle and joint pain on April 11. Bilateral cervical and right axillary lymphadenopathy were noted by his physician. No skin ulcerations were present. A chest X-ray showed no pulmonary abnormalities. He improved following treatment with streptomycin.

Although *Francisella tularensis* was not cultured from blood specimens from any of the men, 2 of the 3 tested had a 4-fold or greater rise in tularemia agglutinin titers, and 1 had a single high convalescent titer.

Epidemiologic investigation revealed that on April 7 Case 1 had killed a wild rabbit with a stick in Tulsa County, Oklahoma, while on a fishing trip with Cases 2, 3, and 4. Cases 1 and 3 subsequently dressed the rabbit, which was then cooked over an open fire. Cases 1, 3, and 4 ingested some of the cooked rabbit. Case 2 tasted the meat but did not swallow it because he did not like the taste. All 4 men handled the rabbit entrails, which were used as fishing bait. None of the men reported exposure to ticks during their outing.

(Reported by W. R. Loerke, D.O., B. J. Sappington, D.O., private physicians, Tulsa; N. J. Newell, D.O., private physician, Oklahoma City; Stanley W. Ferguson, Ph.D., State Epidemiologist, and the Laboratory Division, Oklahoma State Department of Health; and an EIS Officer.)

#### Missouri

On December 27, 1972, 2 brothers, age 9 and 12, killed

a sitting rabbit with a BB gun. Three days later the 12-year-old boy became ill with severe headache, and on the following day he was admitted to a local hospital with a temperature of 103°F. Both the brother and the boys' mother, who had assisted in cleaning the rabbit, experienced similar symptoms. The mother had an indurated cutaneous lesion on the middle finger of her left hand and generalized lymphadenopathy; neither of the boys had an observed cutaneous lesion, but both developed prominent epitrochlear lymphadenopathy. All 3 persons responded clinically to tetracycline and chloramphenicol.

On January 9, the Missouri Division of Health Laboratory reported that the 9-year-old boy had a bacterial agglutination titer of 1:2,560 and his brother and mother had agglutination titers of 1:1,280 against *F. tularensis*.

(Reported by Rosanna Herzog, R.N., Director, St. Genevieve County Nursing Service; E. R. Price, D.V.M., Director, Missouri Bureau of Veterinary Public Health; H. Denny Donnell, Jr., M.D., State Epidemiologist, Missouri Division of Health, Missouri Department of Health and Welfare.)

#### Editorial Note

Both of these outbreaks of tularemia involved contact with tissues of recently killed rabbits infected with *F. tularensis*. High attack rates of tularemia have been reported previously in the southern Mississippi Valley, where cases are often associated with tick bites or direct contact with tissues from infected rabbits (1, 2, 3).

If the cavitory lesion in the third Oklahoma case is due to tularemia, this represents a rare pulmonary finding (4).

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#### RABIES — Tennessee

In late June, a young skunk was found by a family in Gibson County, Tennessee, and adopted as a family pet. A few days later, the family traveled to Florida and took their pet. During the trip the skunk became ill, and after the family returned to Tennessee, it died on July 17. The State Laboratory in Nashville subsequently reported that the brain was positive for rabies by the fluorescent antibody test.

All 5 family members, 2 adults and 3 children, were exposed to the rabid skunk and are receiving antirabies prophylaxis; 1 child, an 11-year-old boy, who is hypersensitive to eggs, is being treated with a non-avian tissue rabies vaccine provided through CDC.

In addition, 3 persons who were exposed to the skunk in Florida are currently receiving antirabies prophylaxis.

(Reported by C. N. Hickman, M.D., Director, Gibson County

Health Department; Robert H. Hutcheson, Jr., M.D., State Epidemiologist, Tennessee Department of Public Health.)

#### Editorial Note

Wild animals are not suitable pets and may expose a family to an unwarranted risk. Indeed, in at least 1 state it is unlawful to have a skunk for a pet. In many parts of the United States, skunks must be considered rabid unless proven otherwise.

The only rabies vaccine available commercially in this country is Duck Embryo Vaccine (Eli Lilly). The contraindications for its use are hypersensitivity either to the vaccine or to egg protein. A supply of non-avian tissue rabies vaccine may be obtained from CDC. Any physician who needs this product should contact his state health department.

## FOLLOW-UP ON RELAPSING FEVER — United States

Three additional cases of relapsing fever in tourists visiting the North Rim of the Grand Canyon have been reported to CDC. A 13-year-old boy from Minnesota who visited the North Rim with his family on June 24, 1973, became ill 6 days later with headache, myalgia, and fever (temperature 105°F). Over the next month, he had 4 relapses of fever and was hospitalized 2 times. The diagnosis of relapsing fever was suggested to the family by a CDC questionnaire which they received August 5. The patient was treated with tetracycline and has been asymptomatic.

A 43-year-old man from California who visited the North Rim on June 14 became ill 9 days later with headache, myalgia, nausea, vomiting, shaking chills, and fever (temperature 104°F). Administration of tetracycline was followed by more severe chills and fever, which cleared over 2 days. The patient then stopped taking tetracycline; 9 days later he developed chills and fever again. Diagnosis of relapsing fever was made during his fourth episode of fever when spirochetes were seen on a Wright's stain preparation of peripheral blood at a Sacramento hospital on July 24. He was treated with tetracycline and has since been asymptomatic.

A 14-year-old girl from Michigan visited the North Rim with her grandparents on July 30. On August 8, she developed

fever (temperature 104°F), headache, chills, weakness, and sweats. The diagnosis of relapsing fever, made on examination of a peripheral blood smear in an Ogden, Utah, hospital, was confirmed by the Bureau of Laboratories, CDC.

(Reported by Herzl Friedlander, M.D., private physician, Sacramento; Stephan Billstein, M.D., Communicable Disease Officer, Sacramento County Health Department; James Chin, M.D., State Epidemiologist, California State Department of Public Health; Chris Holmes, M.D., private physician, Ned Christiansen, Chief Microbiologist, St. Benedict's Hospital, Ogden, Utah; Taira Fukushima, M.D., State Epidemiologist, Utah State Division of Health.)

## Editorial Note

Reactions resembling the Jarisch-Herxheimer reaction have been observed following initial treatment of relapsing fever with tetracycline as well as with other antimicrobial agents (1). It is possible that the exacerbation of fever experienced by the second patient was caused by the destruction of spirochetes during tetracycline therapy.

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## SALMONELLA TYPHI — Maryland

On April 17, 1973, a case of typhoid fever in a 5-year-old girl was reported to the Frederick County Health Department by a private pediatrician. The girl had been hospitalized, and blood and stool specimens had yielded *Salmonella typhi*, phage type C<sub>1</sub>.

Epidemiologic investigation revealed that a known typhoid carrier, a 76-year-old man, resided on the same farm as the patient. He had first been identified as a carrier in 1968 when the woman with whom he lived was found to have typhoid fever. He had been instructed as to personal hygiene and other precautionary steps to avoid transmission of the disease. However, he admitted to sometimes helping prepare food on the farm. *S. typhi*, phage type C<sub>1</sub>, was isolated from his stool on April 30, 1973.

On May 2, 1973, another resident of the farm, a 19-year-old man, had a positive stool specimen for *S. typhi*, phage C<sub>1</sub>. He was asymptomatic at the time the isolation was reported. He was treated with ampicillin and his stool specimens were subsequently negative for enteric pathogens.

On May 17, 1973, the 76-year-old typhoid carrier was admitted to the University of Maryland Hospital for treatment with intravenous ampicillin (6 gm per day for 46 days)

to eradicate his carrier state (1). He responded well to therapy and has had negative stool cultures for several weeks.

Contact investigation of other farm residents failed to reveal any additional cases of *S. typhi*. However, environmental studies revealed fecal coliform contamination of well water and an unsatisfactory sewage disposal system. The farm was closed by the manager on June 5, 1973.

(Reported by Charles E. Wright, M.D., private pediatrician, Frederick County, Maryland; Richard Hornick, M.D., Professor of Medicine and Director, Division of Infectious Diseases, University of Maryland, School of Medicine; Leonard M. Thompson, Sanitarian, Charles G. Spicknall, M.D., Health Officer, Frederick County Health Department; Edwin Swecker, Head, Enteric Bacteriology Laboratory, Laboratories and Research Administration, John D. Stafford, M.D., Chief, Division of Communicable Diseases, Preventive Medicine Administration, Maryland Department of Health and Mental Hygiene.)

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## INTERNATIONAL NOTES

## CHOLERA — Worldwide

## Mauritania

One confirmed and 19 suspect cases of *Vibrio cholerae*, biotype El Tor, have been reported from the Sixth Region in the period July 19-22, 1973. The last reported cases were detected in Mauritania in September 1972.

## Sweden

Two confirmed imported cases of *V. cholerae*, biotype El Tor, serotype Ogawa, were reported on July 24. The 2 women affected, aged 56 and 30, were members of a group of tourists who had visited Tunisia. All necessary measures to ensure that there is no secondary spread have been taken.

## Tunisia

A small localized outbreak of *V. cholerae*, biotype El Tor, with 15 cases was reported on July 24 from an agricultural area in the south of the country between Gabès and Gafsa. All necessary control measures have been taken.

## United Kingdom

One confirmed imported case of *V. cholerae*, biotype El Tor, serotype Ogawa, was recorded on August 1. The man was a member of a group of tourists who had visited Tunisia. His wife, who was in the same tourist group, has also been

(Continued on page 273)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING AUGUST 11, 1973 AND AUGUST 12, 1972 (32nd WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
	1973	1973	1973	1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES .....	190	10	344	2	113	50	18	8	136	965	1,060
NEW ENGLAND .....	15	-	53	-	3	1	2	-	4	45	91
Maine *	-	-	-	-	-	-	-	-	-	2	10
New Hampshire *	-	-	-	-	-	-	-	-	1	5	28
Vermont .....	-	-	1	-	-	-	-	-	-	1	2
Massachusetts .....	4	-	25	-	1	1	2	-	1	23	31
Rhode Island .....	10	-	12	-	2	-	-	-	-	7	4
Connecticut .....	1	-	15	-	-	-	-	-	2	7	16
MIDDLE ATLANTIC .....	13	1	56	-	-	3	-	5	36	123	161
Upstate New York .....	4	1	-	-	-	-	-	4	2	27	35
New York City .....	4	-	56	-	-	-	-	-	10	26	27
New Jersey .....	-	-	NN	-	-	-	-	-	12	31	47
Pennsylvania .....	5	-	-	-	-	3	-	1	12	39	52
EAST NORTH CENTRAL .....	42	-	135	-	-	9	6	-	16	178	164
Ohio *	20	-	6	-	-	6	4	-	1	29	37
Indiana .....	-	-	7	-	-	1	-	-	-	12	6
Illinois .....	1	-	-	-	-	1	-	-	6	50	56
Michigan .....	21	-	35	-	-	1	2	-	9	79	60
Wisconsin .....	-	-	87	-	-	-	-	-	-	8	5
WEST NORTH CENTRAL .....	1	-	5	-	7	4	-	1	2	29	54
Minnesota .....	-	-	-	-	-	-	-	1	1	5	5
Iowa .....	-	-	4	-	-	2	-	-	-	4	14
Missouri .....	1	-	-	-	-	2	-	-	-	5	20
North Dakota .....	-	-	1	-	-	-	-	-	-	-	2
South Dakota .....	-	-	-	-	7	-	-	-	-	-	2
Nebraska .....	-	-	-	-	-	-	-	-	-	1	3
Kansas .....	-	-	-	-	-	-	-	-	1	14	8
SOUTH ATLANTIC .....	34	2	36	-	-	4	2	1	14	185	156
Delaware .....	-	-	1	-	-	-	-	-	-	-	5
Maryland .....	2	-	1	-	-	2	-	-	-	4	14
District of Columbia .....	4	-	-	-	-	-	-	-	-	3	-
Virginia .....	9	-	8	-	-	-	1	-	3	17	23
West Virginia *	9	-	22	-	-	-	1	-	-	7	8
North Carolina .....	5	-	NN	-	-	1	-	-	2	23	29
South Carolina .....	-	-	4	-	-	-	-	-	-	12	7
Georgia .....	1	2	-	-	-	-	-	-	-	34	35
Florida .....	4	-	-	-	-	1	-	1	9	85	35
EAST SOUTH CENTRAL .....	11	2	11	-	-	2	2	1	5	60	50
Kentucky .....	6	-	11	-	-	-	2	-	-	14	22
Tennessee .....	2	2	NN	-	-	-	-	1	3	36	25
Alabama .....	1	-	-	-	-	1	-	-	2	4	1
Mississippi .....	2	-	-	-	-	1	-	-	-	6	2
WEST SOUTH CENTRAL .....	18	-	1	2	11	18	5	-	16	97	98
Arkansas *	-	-	-	-	-	-	-	-	-	-	4
Louisiana .....	1	-	NN	-	-	1	-	-	1	10	16
Oklahoma .....	17	-	1	-	-	17	2	-	-	11	17
Texas .....	-	-	-	2	11	-	3	-	15	76	61
MOUNTAIN .....	1	1	9	-	14	-	-	-	6	41	61
Montana .....	1	-	-	-	-	-	-	-	-	1	3
Idaho .....	-	-	-	-	-	-	-	-	-	1	10
Wyoming .....	-	-	-	-	-	-	-	-	-	1	-
Colorado .....	-	-	2	-	-	-	-	-	3	9	14
New Mexico .....	-	1	7	-	6	-	-	-	1	10	2
Arizona *	-	-	-	-	8	-	-	-	-	9	18
Utah .....	-	-	-	-	-	-	-	-	2	8	6
Nevada .....	-	-	-	-	-	-	-	-	-	2	8
PACIFIC .....	55	4	38	-	78	9	1	-	37	207	225
Washington .....	3	-	11	-	70	1	-	-	3	29	7
Oregon .....	-	-	-	-	3	-	1	-	-	10	37
California .....	51	4	-	-	3	7	-	-	34	165	166
Alaska .....	-	-	10	-	2	-	-	-	-	-	1
Hawaii .....	1	-	17	-	-	1	-	-	-	3	14
Guam .....	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico *	-	-	12	-	-	-	-	-	-	4	8
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Chickenpox: N. H. 3, Ark. 2  
Diphtheria: Ariz. 7

Hepatitis B: Ohio 2, W. Va. delete 2  
Hepatitis A: Me. 9, N. H. 2, Ohio delete 2,  
W. Va. 2, Ark. 2, Ariz. 9, Puerto Rico 3

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING AUGUST 11, 1973 AND AUGUST 12, 1972 (32nd WEEK) — Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	7	149	123	23,718	26,349	16	984	942	459	53,897	98	25,564
NEW ENGLAND .....	—	12	4	7,350	3,052	2	46	38	25	2,735	6	3,586
Maine *	—	—	—	64	243	—	1	3	1	306	—	68
New Hampshire *	—	—	1	857	228	—	6	3	—	178	1	354
Vermont .....	—	2	—	118	125	1	3	—	—	241	—	43
Massachusetts .....	—	6	3	3,912	658	—	12	18	4	805	3	2,034
Rhode Island .....	—	—	—	603	519	—	3	10	8	318	—	210
Connecticut .....	—	4	—	1,796	1,279	1	21	4	12	887	2	877
MIDDLE ATLANTIC .....	—	21	39	2,391	957	3	132	119	84	7,043	8	4,142
Upstate New York .....	—	12	7	787	124	—	46	32	NN	NN	2	409
New York City .....	—	1	11	870	294	1	27	36	77	4,402	4	449
New Jersey .....	—	4	7	389	484	2	31	24	4	1,471	1	2,997
Pennsylvania .....	—	4	14	345	55	—	28	27	3	1,170	1	287
EAST NORTH CENTRAL .....	1	21	41	8,355	10,855	1	126	139	88	13,956	48	5,815
Ohio .....	—	4	—	278	235	—	56	54	9	2,640	2	677
Indiana .....	—	3	1	618	1,225	—	4	11	10	1,154	1	924
Illinois .....	1	11	8	2,012	4,034	—	24	30	18	2,355	4	911
Michigan .....	—	3	28	4,330	1,968	1	37	38	18	3,872	25	1,806
Wisconsin .....	—	—	4	1,117	3,393	—	5	6	33	3,935	16	1,497
WEST NORTH CENTRAL .....	1	6	2	436	933	2	77	68	8	4,567	3	1,197
Minnesota .....	—	1	—	19	19	1	7	19	2	79	1	219
Iowa .....	1	1	1	277	650	1	18	2	1	2,788	2	186
Missouri .....	—	1	—	49	162	—	31	20	2	660	—	259
North Dakota .....	—	1	—	58	51	—	3	—	—	64	—	276
South Dakota .....	—	—	—	—	6	—	4	2	—	17	—	23
Nebraska .....	—	1	1	6	18	—	7	9	3	123	—	139
Kansas .....	—	1	—	27	27	—	7	16	—	836	—	95
SOUTH ATLANTIC .....	1	23	2	1,177	2,096	3	162	211	81	6,354	6	2,070
Delaware .....	—	—	—	8	48	—	—	1	4	262	1	13
Maryland .....	1	3	—	12	15	—	22	33	6	615	—	10
District of Columbia .....	—	1	—	5	2	—	4	9	8	95	—	3
Virginia .....	—	5	1	411	59	—	29	47	12	674	1	621
West Virginia .....	—	—	—	190	261	—	2	7	24	2,208	2	283
North Carolina .....	—	6	—	4	32	1	36	27	NN	NN	—	201
South Carolina .....	—	1	—	57	214	—	10	20	1	349	—	84
Georgia .....	—	3	1	148	165	—	20	10	3	29	—	11
Florida .....	—	4	—	342	1,300	2	39	57	23	2,122	2	844
EAST SOUTH CENTRAL .....	—	5	5	592	1,031	—	91	76	43	4,350	7	1,263
Kentucky .....	—	1	1	364	519	—	32	25	7	1,278	—	380
Tennessee .....	—	—	—	165	191	—	37	28	25	2,002	5	505
Alabama .....	—	4	4	9	140	—	15	15	9	614	—	184
Mississippi .....	—	—	—	54	181	—	7	8	2	456	2	194
WEST SOUTH CENTRAL .....	—	9	6	640	1,419	1	153	115	46	3,566	6	1,425
Arkansas .....	—	—	—	69	13	—	13	9	1	345	—	112
Louisiana *	—	2	—	84	82	1	31	35	5	75	—	99
Oklahoma .....	—	1	1	52	10	—	27	6	1	421	—	175
Texas .....	—	6	5	435	1,314	—	82	65	39	2,725	6	1,039
MOUNTAIN .....	—	9	6	581	1,745	2	31	17	13	2,399	6	2,354
Montana .....	—	1	—	16	15	—	6	2	1	222	1	500
Idaho .....	—	—	1	248	24	—	4	4	—	110	—	33
Wyoming .....	—	—	1	80	51	—	—	1	—	420	—	6
Colorado .....	—	2	—	102	517	2	11	4	8	423	3	1,539
New Mexico .....	—	2	4	116	114	—	3	2	4	955	2	188
Arizona .....	—	4	—	16	869	—	3	1	—	140	—	17
Utah .....	—	—	—	2	155	—	2	2	—	121	—	68
Nevada .....	—	—	—	1	—	—	2	1	—	8	—	3
PACIFIC .....	4	43	18	2,196	4,261	2	166	159	71	8,927	8	3,712
Washington .....	—	3	2	1,002	973	—	17	12	—	1,406	1	652
Oregon .....	—	2	1	453	115	—	12	13	18	1,657	2	774
California .....	4	35	14	657	3,067	2	131	125	45	4,939	5	2,251
Alaska .....	—	2	—	65	11	—	6	6	4	679	—	9
Hawaii .....	—	1	1	19	95	—	—	3	4	246	—	26
Guam .....	—	—	—	26	8	—	—	11	—	17	—	8
Puerto Rico .....	—	—	34	1,751	592	—	7	4	18	654	—	26
Virgin Islands .....	—	—	—	—	2	—	—	2	1	21	—	2

\*Delayed reports: Measles: La. 1  
Mumps: Me. 6, N. H. 1  
Rubella: La. delete 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING AUGUST 11, 1973 AND AUGUST 12, 1972 (32nd WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES . . . . .	50	658	19,578	93	13	439	27	435	16,527	500	75	2,294
NEW ENGLAND . . . . .	2	11	672	—	2	8	—	1	420	24	2	96
Maine * . . . . .	—	4	54	—	—	—	—	—	28	5	1	55
New Hampshire . . . . .	—	2	39	—	—	—	—	—	20	—	1	33
Vermont * . . . . .	—	1	19	—	—	—	—	—	6	—	—	3
Massachusetts . . . . .	—	—	353	—	2	8	—	1	211	1	—	4
Rhode Island . . . . .	1	2	47	—	—	—	—	—	57	—	—	—
Connecticut . . . . .	1	2	160	—	—	—	—	—	98	18	—	1
MIDDLE ATLANTIC . . . . .	7	119	3,832	—	—	40	2	24	2,370	124	6	26
Upstate New York . . . . .	1	21	695	—	—	6	2	12	366	14	—	10
New York City . . . . .	3	50	1,449	—	—	14	—	1	1,063	61	—	—
New Jersey . . . . .	2	17	657	—	—	12	—	5	464	17	—	—
Pennsylvania . . . . .	1	31	1,031	—	—	8	—	6	477	32	6	16
EAST NORTH CENTRAL . . . . .	8	103	2,986	2	2	24	—	17	2,052	20	4	215
Ohio * . . . . .	1	31	888	—	—	9	—	13	588	3	—	29
Indiana . . . . .	1	16	387	—	—	—	—	—	363	4	—	47
Illinois . . . . .	3	24	909	—	1	6	—	4	190	6	2	58
Michigan . . . . .	1	32	725	2	1	7	—	—	719	7	—	4
Wisconsin . . . . .	2	—	77	—	—	2	—	—	192	—	2	77
WEST NORTH CENTRAL . . . . .	4	28	786	10	2	17	—	14	957	14	25	740
Minnesota . . . . .	—	5	96	—	—	4	—	—	210	—	13	256
Iowa * . . . . .	—	3	84	—	—	—	—	7	161	13	5	151
Missouri . . . . .	3	13	365	10	—	9	—	6	264	1	2	68
North Dakota . . . . .	1	—	28	—	—	—	—	—	16	—	5	122
South Dakota . . . . .	—	2	54	—	—	1	—	—	42	—	—	77
Nebraska . . . . .	—	1	49	—	—	1	—	1	52	—	—	3
Kansas . . . . .	—	4	110	—	2	2	—	—	212	—	—	63
SOUTH ATLANTIC . . . . .	8	125	3,873	8	3	230	21	219	4,367	158	10	191
Delaware . . . . .	—	3	53	—	—	—	—	7	80	—	—	3
Maryland . . . . .	—	17	417	—	—	6	1	9	497	15	—	9
District of Columbia . . . . .	—	—	172	—	—	—	—	—	429	27	—	—
Virginia . . . . .	2	18	508	3	—	3	3	46	450	37	3	58
West Virginia * . . . . .	—	4	180	—	—	2	—	2	77	—	—	18
North Carolina . . . . .	—	29	623	1	—	4	14	96	455	16	—	1
South Carolina * . . . . .	—	—	340	—	—	4	1	26	49	7	1	4
Georgia . . . . .	1	17	640	3	—	1	2	33	929	15	4	64
Florida . . . . .	5	37	940	1	3	210	—	—	1,401	41	2	34
EAST SOUTH CENTRAL . . . . .	7	64	1,778	6	1	19	2	67	1,573	39	3	347
Kentucky . . . . .	1	21	417	1	—	3	—	—	204	7	—	188
Tennessee . . . . .	4	12	551	4	1	9	1	31	638	12	1	120
Alabama . . . . .	2	21	472	—	—	2	—	9	478	16	1	38
Mississippi . . . . .	—	10	338	1	—	5	1	27	253	4	1	1
WEST SOUTH CENTRAL . . . . .	8	91	2,009	65	—	20	2	78	2,143	65	8	427
Arkansas * . . . . .	—	8	238	45	—	3	—	12	154	4	1	90
Louisiana * . . . . .	3	24	326	—	—	6	—	—	469	17	2	35
Oklahoma . . . . .	3	7	170	17	—	2	1	63	159	4	1	134
Texas . . . . .	2	52	1,275	3	—	9	1	3	1,361	40	4	168
MOUNTAIN . . . . .	—	18	626	1	—	8	—	8	400	5	2	22
Montana * . . . . .	—	—	29	—	—	—	—	1	30	—	—	—
Idaho . . . . .	—	—	26	—	—	—	—	2	28	—	—	—
Wyoming . . . . .	—	7	18	—	—	1	—	1	9	—	—	—
Colorado . . . . .	—	6	120	—	—	1	—	1	118	3	—	—
New Mexico . . . . .	—	1	140	1	—	2	—	3	159	2	2	4
Arizona * . . . . .	—	—	226	—	—	4	—	—	—	—	—	18
Utah . . . . .	—	—	25	—	—	—	—	—	37	—	—	—
Nevada . . . . .	—	4	42	—	—	—	—	—	19	—	—	—
PACIFIC . . . . .	6	99	3,016	1	3	73	—	7	2,245	51	15	230
Washington . . . . .	2	8	248	—	—	6	—	4	257	3	—	3
Oregon . . . . .	1	2	165	—	—	2	—	2	200	—	3	6
California . . . . .	3	88	2,362	1	2	63	—	1	1,642	47	12	214
Alaska . . . . .	—	—	67	—	1	1	—	—	83	—	—	7
Hawaii . . . . .	—	1	174	—	—	1	—	—	63	1	—	—
Guam . . . . .	—	—	28	—	—	—	—	—	—	—	—	—
Puerto Rico . . . . .	4	9	298	—	—	3	—	—	111	11	1	35
Virgin Islands . . . . .	—	—	1	—	—	—	—	—	4	—	—	—

\*Delayed reports: TB: Ohio delete 5, Iowa delete 1, La. delete 2  
Tularemia: Ark. 1  
Typhoid: Ariz. 1

RMSF: W. Va. 1, S.C. delete 1, Mont. 1  
Syphilis: Vt. delete 1  
Animal rabies: Me. 1, Ariz. 1

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING AUGUST 11, 1973

Week No.

32

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
<b>NEW ENGLAND</b>	734	413	23	30	<b>SOUTH ATLANTIC</b>	1,185	615	43	32
Boston, Mass.	276	132	10	7	Atlanta, Ga.	139	71	4	3
Bridgeport, Conn.	35	21	—	1	Baltimore, Md.	194	101	6	2
Cambridge, Mass.	19	14	1	1	Charlotte, N. C.	53	31	2	—
Fall River, Mass.	27	17	—	1	Jacksonville, Fla.	109	60	6	3
Hartford, Conn.	51	34	3	—	Miami, Fla.	114	58	5	3
Lowell, Mass.	30	14	1	1	Norfolk, Va.	49	21	5	2
Lynn, Mass.	24	18	—	—	Richmond, Va.	83	44	1	6
New Bedford, Mass.	37	25	—	5	Savannah, Ga.	32	11	3	1
New Haven, Conn.	52	25	2	—	St. Petersburg, Fla.	90	69	1	5
Providence, R. I.	55	30	1	11	Tampa, Fla.	72	37	—	4
Somerville, Mass.	7	5	—	—	Washington, D. C.	196	88	7	3
Springfield, Mass.	57	33	4	3	Wilmington, Del.	54	24	3	—
Waterbury, Conn.	28	18	—	—	<b>EAST SOUTH CENTRAL</b>	690	353	37	22
Worcester, Mass.	36	27	1	—	Birmingham, Ala.	137	80	8	3
<b>MIDDLE ATLANTIC</b>	3,075	1,907	83	143	Chattanooga, Tenn.	46	21	1	1
Albany, N. Y.	58	36	3	1	Knoxville, Tenn.	30	20	—	2
Allentown, Pa.	21	16	—	2	Louisville, Ky.	140	67	6	8
Buffalo, N. Y.	152	101	4	10	Memphis, Tenn.	148	77	6	1
Camden, N. J.	46	25	1	2	Mobile, Ala.	59	28	3	2
Elizabeth, N. J.	28	20	—	1	Montgomery, Ala.	40	21	5	1
Erie, Pa.	33	19	4	1	Nashville, Tenn.	90	39	8	4
Jersey City, N. J.	41	22	1	—	<b>WEST SOUTH CENTRAL</b>	1,314	678	82	33
Newark, N. J.	67	41	4	2	Austin, Tex.	34	15	5	1
New York City, N. Y. †	1,506	937	38	54	Baton Rouge, La.	57	30	5	—
Paterson, N. J.	41	27	1	—	Corpus Christi, Tex.	30	17	1	—
Philadelphia, Pa.	499	295	17	33	Dallas, Tex.	147	67	14	—
Pittsburgh, Pa.	165	89	4	12	El Paso, Tex.	38	15	3	3
Reading, Pa.	44	33	—	1	Fort Worth, Tex.	74	41	2	—
Rochester, N. Y.	127	88	—	7	Houston, Tex.	293	145	13	5
Schenectady, N. Y.	23	14	—	—	Little Rock, Ark.	59	30	5	6
Scranton, Pa.	40	26	—	2	New Orleans, La.	168	89	8	4
Syracuse, N. Y.	91	54	6	4	Oklahoma City, Okla. *	92	51	6	2
Trenton, N. J.	37	21	—	3	San Antonio, Tex.	165	83	13	3
Utica, N. Y.	18	15	—	5	Shreveport, La.	76	46	4	3
Yonkers, N. Y.	38	28	—	3	Tulsa, Okla.	81	49	3	6
<b>EAST NORTH CENTRAL</b>	2,503	1,454	109	61	<b>MOUNTAIN</b>	502	281	25	18
Akron, Ohio	72	43	5	—	Albuquerque, N. Mex.	37	23	—	4
Canton, Ohio	48	28	2	1	Colorado Springs, Colo.	29	16	1	4
Chicago, Ill.	682	386	27	12	Denver, Colo.	124	65	6	5
Cincinnati, Ohio	148	92	6	4	Las Vegas, Nev.	42	20	2	—
Cleveland, Ohio	192	115	6	—	Ogden, Utah	29	16	2	1
Columbus, Ohio	135	79	10	3	Phoenix, Ariz.	88	47	7	2
Dayton, Ohio	131	79	6	—	Pueblo, Colo.	17	11	1	2
Detroit, Mich.	314	170	12	10	Salt Lake City, Utah	63	39	3	—
Evansville, Ind.	50	33	3	5	Tucson, Ariz.	73	44	3	—
Fort Wayne, Ind.	43	25	—	5	<b>PACIFIC</b>	1,573	968	47	35
Gary, Ind.	34	14	2	3	Berkeley, Calif.	25	17	—	1
Grand Rapids, Mich.	57	42	1	7	Fresno, Calif.	52	28	2	—
Indianapolis, Ind.	173	95	7	1	Glendale, Calif.	25	16	1	1
Madison, Wis.	36	20	2	2	Honolulu, Hawaii	48	32	1	—
Milwaukee, Wis.	123	72	8	2	Long Beach, Calif.	98	60	3	2
Peoria, Ill.	48	29	1	—	Los Angeles, Calif.	493	311	6	10
Rockford, Ill.	20	8	3	1	Oakland, Calif.	77	40	5	2
South Bend, Ind.	29	22	1	2	Pasadena, Calif.	24	17	—	2
Toledo, Ohio	99	65	5	1	Portland, Oreg.	118	84	—	3
Youngstown, Ohio	69	37	2	2	Sacramento, Calif.	64	30	5	—
<b>WEST NORTH CENTRAL</b>	756	441	31	24	San Diego, Calif.	110	64	9	2
Des Moines, Iowa	66	41	—	2	San Francisco, Calif.	166	98	4	3
Duluth, Minn.	21	10	1	—	San Jose, Calif.	47	32	1	2
Kansas City, Kans.	29	10	—	1	Seattle, Wash.	125	71	7	3
Kansas City, Mo.	132	70	8	2	Spokane, Wash.	59	39	2	3
Lincoln, Nebr.	18	13	—	—	Tacoma, Wash.	42	29	1	1
Minneapolis, Minn.	115	69	7	1	<b>Total</b>	12,332	7,110	480	398
Omaha, Nebr.	69	36	2	—	<b>Expected Number</b>	12,129	6,854	549	392
St. Louis, Mo.	191	119	7	11	<b>Cumulative Total (includes reported corrections for previous weeks)</b>	417,362	245,896	15,500	17,284
St. Paul, Minn.	63	42	3	1					
Wichita, Kans.	52	31	3	6					

†Delayed report for week ending August 4, 1973

\*Estimate based on average percent of divisional total

**CHOLERA — Continued**

shown to be excreting vibrios of the same serotype, although apart from mild diarrhea during her stay in Tunisia, she has not been ill.

Another imported case was reported on August 7 from a different group staying in Tunisia, and again *V. cholerae*, biotype El Tor, serotype Ogawa, has been identified.

**Federal Republic of Germany**

One confirmed imported case of *V. cholerae* (type not yet specified) was reported on August 6. The patient had returned from Tunisia 2 days prior to the onset of illness. Two family contacts have been isolated, and all necessary measures to prevent secondary spread have been taken.

A second imported case of *V. cholerae*, biotype El Tor, serotype Ogawa, was reported on August 9. This patient had returned from Tunisia on August 7.

**Niger**

Five confirmed and 67 suspect cases of cholera were reported on August 14 from Tera Arr (Niamey Department).

**Editorial Note**

The attention of all health administrations is drawn to the fact that no part of the Federal Republic of Germany nor the United Kingdom should be considered as infected as a re-

sult of these imported cases. It is most probable that the vibrio in the case imported into the Federal Republic of Germany will also prove to be El Tor, Ogawa. The recent 7 importations in tourists from Tunisia into the above-mentioned countries will thus all have been due to the same serotype.

The "prompt notification of the occurrence of the diseases subject to the International Health Regulations (1969) as an indispensable basis for the efficient implementation of these Regulations" has been called to the attention of all Member States by the World Health Assembly in resolution WHA26.54

In this connection, the prompt notification of the appearance of cholera is to be commended. This enables the Organization to provide the necessary information to national health administrations without delay, thus facilitating the implementation of adequate surveillance measures, which constitute the most effective method to contain the spread of the disease.

*(Reported by the World Health Organization: Weekly Epidemiological Record, Vol. 48, Nos. 30-32, July 27, August 3, August 10, 1973, and the Epidemiological Bulletin, No. 1, August 14.)*

**INFLUENZA — Worldwide****Australia**

In addition to the scattered influenza cases associated with virus B which are being observed throughout the Melbourne metropolitan area, an epidemic of respiratory illness was reported on July 17 in a country town of 15,000 inhabitants in Victoria; 2 strains of virus B were isolated from patients in the town. On July 18, absenteeism was 120/560 in 1 primary school and 70/690 in another.

One strain of virus B isolated from patients in Melbourne was obtained in a fatal fulminating case from a 22-year-old male with pneumonia and shock.

**Japan**

The influenza epidemic associated with virus B which began in late April has developed in the whole of Japan. It has started to decline, though it is still spreading in some places. In most areas it was associated with a virus antigenically close to the strains intermediate between the new variant B/HK/5/72 and the previous B strains. In Tokyo, Kanagawa, and Tochigi Prefectures, however, a minority of strains of the previous B virus were also isolated.

A survey of serum obtained before the epidemic from children in a secondary school in Ibaragi Prefecture has shown

that most of them had no antibody against the virus B which caused the epidemic (a few showed very low titers), whereas more or less high antibody titers to previous B viruses were found in the same population.

**Kenya**

An influenza epidemic was observed in Kenya between May and early July. It began on the coast in the second week of May and reached Nairobi in early June and west Kenya by the end of June. The disease was relatively mild. Several strains of a virus antigenically close to A/England/42/72 have been isolated.

**International Influenza Center for the Americas — Atlanta**

Strains of influenza virus A antigenically close to the variant A/England/42/72 have been isolated since December 1972 in the following countries: Argentina—epidemics in Viedma, Rio Negro Province in April and Córdoba region in June; Brazil—epidemics in São Paulo in January; Trinidad and Tobago—epidemic in Port-of-Spain in December 1972 and January 1973; Uruguay—epidemic in the second half of April and in May.

*(Reported by the World Health Organization: Weekly Epidemiological Record, Vol. 48, No. 31, August 3, 1973.)*

**CURRENT TRENDS****TUBERCULOSIS CASES AND CASE RATES — United States, 1972**

In 1972, a total of 32,882 new cases of active tuberculosis were reported in the United States, a decrease of 6.6% from 1971. The case rate declined 7.6% — from 17.1 per 100,000 population in 1971 to 15.8 in 1972. Case rates for individual states ranged from a high of 38.9 in Hawaii to a low of 4.1 in Iowa. The case rate recorded in the District of Columbia was 47.3, which exceeded case rates in all states. For the past 2 years, Hawaii, Alaska, and Alabama have reported the highest rates; however, Alaska had a case rate decline of 26.6% from 33.5 in 1971 to 24.6 in 1972, and case rates decreased 6.5% and 7.4% in Hawaii and Alabama, re-

spectively. The 3 lowest ranked states in 1972 were Iowa, New Hampshire, and North Dakota. North Dakota, which ranked 39 in 1971, fell to 49 in 1972, and the case rate showed a 40.2% decrease. Iowa had an annual case rate decline of 8.9% while New Hampshire had an annual increase of 19.5% (Table 1).

The 5 most populous states—California, New York, Illinois, Pennsylvania, and Texas—accounted for 39% of the total new cases of tuberculosis reported this year.

*(Reported by the Tuberculosis Branch, Bureau of State Services, CDC.)*

Table 1  
New Active Tuberculosis Cases and Rates per 100,000 Population, by State — United States, 1972 and 1971

State	New Active Cases		Case Rate		Rank According to Rate		Estimated Population as of July 1, 1972
	1972	1971	1972	1971	1972	1971	
United States	32,882	35,217	15.8	17.1	..	..	208,232,000
Alabama	918	985	26.2	28.3	2	3	3,510,000
Alaska	80	105	24.6	33.5	3	2	325,000
Arizona	396	459	20.4	24.8	11	5	1,945,000
Arkansas	434	482	21.9	24.8	6	6	1,978,000
California	3,326	3,488	16.2	17.2	21	20	20,468,000
Colorado	245	257	10.4	11.3	34	33	2,357,000
Connecticut	246	270	8.0	8.8	40	38	3,082,000
Delaware	103	83	18.2	14.9	15	25	565,000
District of Columbia	354	323	47.3	43.6	..	..	748,000
Florida	1,517	1,551	20.9	22.0	8	9	7,259,000
Georgia	897	977	19.0	20.9	13	12	4,720,000
Hawaii	315	328	38.9	41.6	1	1	809,000
Idaho	62	56	8.2	7.7	38	43	756,000
Illinois	1,940	2,138	17.2	19.1	18	18	11,251,000
Indiana	722	767	13.6	14.5	26	27	5,291,000
Iowa	117	129	4.1	4.5	50	48	2,883,000
Kansas	169	156	7.5	6.9	42	45	2,258,000
Kentucky	715	755	21.7	23.0	7	8	3,299,000
Louisiana	520	747	14.0	20.3	24	14	3,720,000
Maine	87	81	8.5	8.1	37	41	1,029,000
Maryland	838	840	20.7	21.0	10	11	4,056,000
Massachusetts	734	763	12.7	13.3	28	29	5,787,000
Michigan	1,261	1,312	13.9	14.6	25	26	9,082,000
Minnesota	202	206	5.2	5.3	47	47	3,896,000
Mississippi	400	431	17.7	19.4	17	16	2,263,000
Missouri	605	710	12.7	15.0	27	24	4,753,000
Montana	64	78	8.9	11.0	36	34	719,000
Nebraska	101	82	6.6	5.4	43	46	1,525,000
Nevada	43	46	8.2	9.1	39	37	527,000
New Hampshire	38	31	4.9	4.1	48	49	771,000
New Jersey	1,208	1,298	16.4	17.8	20	19	7,367,000
New Mexico	194	172	18.2	16.7	16	21	1,065,000
New York	3,451	3,752	18.8	20.4	14	13	18,366,000
North Carolina	996	1,043	19.1	20.3	12	15	5,214,000
North Dakota	31	51	4.9	8.2	49	39	632,000
Ohio	1,252	1,301	11.6	12.1	30	31	10,783,000
Oklahoma	330	347	12.5	13.3	29	28	2,634,000
Oregon	234	249	10.7	11.5	32	32	2,182,000
Pennsylvania	1,772	1,928	14.9	16.2	22	22	11,926,000
Rhode Island	108	116	11.2	12.1	31	30	968,000
South Carolina	651	669	24.4	25.5	4	4	2,665,000
South Dakota	69	69	10.2	10.3	35	36	679,000
Tennessee	929	878	23.0	22.0	5	10	4,031,000
Texas	2,422	2,730	20.8	23.8	9	7	11,649,000
Utah	62	44	5.5	4.0	45	50	1,126,000
Vermont	36	37	7.8	8.1	41	40	462,000
Virginia	817	912	17.1	19.3	19	17	4,764,000
Washington	359	358	10.4	10.4	33	35	3,443,000
West Virginia	252	276	14.1	15.8	23	23	1,781,000
Wisconsin	240	324	5.3	7.2	46	44	4,520,000
Wyoming	20	27	5.8	7.9	44	42	345,000
Puerto Rico*	644	808	23.7	29.8	..	..	2,712,000

\*Not included in totals

District of Columbia is classified as a city and is not ranked with the States.

## CURRENT TRENDS

## ARTHROPOD-BORNE VIRUS DISEASE AND SURVEILLANCE – California, Southeastern United States

## California

In 1972, the California State Department of Public Health reported a total of 5 human cases of St. Louis encephalitis (SLE), 3 of western equine encephalomyelitis (WEE), 1 of introduced Venezuelan equine encephalitis (VEE), and 3 of introduced dengue; in addition, 6,336 mosquito pools were tested through surveillance programs and 180 viruses isolated (MMWR, Vol. 22, No. 16). One of the SLE cases is briefly described below:

On October 5, 1972, a 17-year-old field worker from Delano, California, had sudden onset of severe headache. The next day, he also experienced neck pain and nausea, and on October 7, he consulted his private physician. Physical examination revealed a temperature of 101°F but was otherwise unremarkable. The tentative diagnosis was aseptic meningitis, and the patient was admitted to a local hospital.

On the evening of admission, the patient's temperature rose to 106°F, and he had a convulsive seizure. Nuchal rigidity was noted, but there were no other unusual findings. Headache persisted until October 13, but by October 20, the patient had no symptoms and was discharged.

Acute and convalescent serum specimens drawn on October 11 and 31, respectively, were sent to the State Laboratory for testing and showed a rise in titer from 1:32 to 1:128 by the fluorescent antibody titer method.

Between January 1 and August 1, 1973, continued surveillance has revealed no human cases of arbovirus encephalitis; of the cases of suspect encephalitis in equines reported to the State Health Department in this period, none have been confirmed by laboratory tests as due to arboviruses. Twenty horse brains have been tested in suckling mice, and none yielded arboviruses.

In the first 7 months of 1973, 2,554 mosquito pools (more than 87,000 individual mosquitoes) were tested, and 127 viruses were isolated: 50 WEE, 20 SLE, 35 Turlock, 20 of a virus (V4038) still being characterized, and 2 unidentified isolates. Most of the WEE and SLE viruses have been from the Imperial Valley. Additional isolates of WEE and SLE viruses have been reported from University of California at Los Angeles study sites in Imperial County.

(Reported by Peter Cummings, M.D., private physician, Delano, California; Telford H. Work, M.D., University of California at Los Angeles; Richard W. Emmons, M.D., Public Health Medical Officer, James Chin, M.D., State Epidemiologist, Edwin H. Lennette, M.D., Ph.D., Chief, Biomedical Laboratories, California State Department of Public Health.)

## Southeastern United States

Since early summer 1973, an increase in the number of horses affected with symptoms of encephalitis has been reported from the Southeastern United States. Viral isolations or positive serologic tests have implicated eastern equine encephalomyelitis (EEE) virus as the agent in 26 animals from the following 6 states: Mississippi (1); Louisiana (1); Georgia (7); South Carolina (8); North Carolina (7); Virginia (2). Florida has confirmed 56 horse deaths as due to EEE virus by hemagglutination-inhibition (HI) tests. The Florida in-

vestigators have noted a generally higher titer of HI antibody to the EEE virus than in previous years. The cases from all 7 states have been geographically scattered indicating a generalized increase in normal seasonal arbovirus transmission in the Southeast.

In the past month, a cluster of 9 encephalitis cases in horses occurred north of Beaumont, Texas. Seven horses became ill in the last week of July and the first week of August. All had a similar picture of encephalitis of rapid onset. Six died within 4 days of onset, and the remaining horse has not yet recovered. Viral neutralization and HI tests on serum from 1 horse indicate EEE infection as the probable cause of death. (Reported by James B. Nichols, D.V.M., Director, Division of Veterinary Public Health, Florida State Board of Health; R. K. Sikes, D.V.M., State Public Health Veterinarian, Maurice Miot, Chief, Virus Laboratory, John E. McCroan, Ph.D., State Epidemiologist, Georgia State Department of Human Resources; Charles T. Caraway, D.V.M., State Epidemiologist, Louisiana State Department of Health; Durward L. Blakey, M.D., State Epidemiologist, Mississippi State Board of Health, John Lomi, D.V.M., USDA, Jackson, Mississippi; T. B. Ryan, D.V.M., Rollins Animal Disease Diagnostic Laboratory, North Carolina Department of Agriculture, Martin P. Hines, D.V.M., State Epidemiologist, North Carolina State Board of Health; Carl E. Boyd, D.V.M., State Veterinarian, W. B. Gamble, M.D., State Epidemiologist, South Carolina State Board of Health; William Crenshaw, D.V.M., N. G. Ferrell, D.V.M., private veterinarians, Beaumont, Texas; William R. Bilderback, D.V.M., Assistant to the Director, A. B. Rich, D.V.M., Director, Veterinary Public Health Division, M. S. Dickerson, M.D., State Epidemiologist, Texas State Department of Health; A. J. Roth, Coordinator, Animal Health Services, Virginia Department of Agriculture, Karl A. Western, M.D., State Epidemiologist, Virginia Department of Health.)

## Editorial Note

As the late summer arboviral encephalitis season approaches, increased awareness and surveillance of primary encephalitis in the United States is encouraged, especially in the wake of the recent flooding in the Mississippi-Missouri River basins. Residual flood water may lead to increased mosquito breeding and consequently increased vector density. Generally such a trend has not yet been noted, but breeding is being closely watched in many areas. Other flood-induced phenomena such as a decrease in the number of natural mammalian and avian hosts (leading to increased human biting) or increased migratory bird populations may alter otherwise normally stable transmission cycles.

The increased number of confirmed EEE cases in horses in the Southeastern United States is significant because human epidemics of arthropod-borne encephalitis characteristically occur in conjunction with horse epidemics. No confirmed human cases have been reported from individual states, and the CDC Bureau of Laboratories has not identified serologically or by viral isolation any arbovirus as a cause of human encephalitis; however, based on weekly telegraphic reports received through August 4, cases of primary encephalitis reported in the United States this year are 17% greater than the median for the previous 5 years and 40% greater than for the same period in 1972.

EPIDEMIOLOGIC NOTES AND REPORTS  
CRYPTIC MALARIA — North Carolina, New York

On July 1, 1973, a 53-year-old woman was admitted to Kings County Hospital, New York, with a 1-week history of intermittent chills and fever. A peripheral blood smear demonstrated *Plasmodium falciparum* parasites; this finding was confirmed at CDC. The patient was treated with antimalarial drugs and recovered uneventfully.

Epidemiologic investigation revealed that the patient, a resident of Brooklyn, had traveled to a rural community south of Raleigh, North Carolina, on June 18 accompanied by her niece and the niece's 2 daughters. She stayed at her sister's home until June 25 when she became ill. She returned to Brooklyn with her niece that day and remained there until her hospitalization.

The patient gave no history of foreign travel except to Canada, blood transfusions, or parenteral drug use, and her family concurred. Physical examination revealed no evidence of drug use. The patient had 2 tattoos on her left arm which were at least 2 years old. She and her family denied any contact with residents of malarious areas.

Interviews with inhabitants of the rural community near Raleigh failed to reveal a potential source of infection. Peripheral blood smears performed on specimens from the patient's sister and 2 grandnieces were negative for malaria parasites.

Further investigation revealed that 2 children living in Raleigh who were originally from Zaire had been treated for falciparum malaria on approximately May 30. They lived 12

miles from the community where the patient had stayed, and their father denied traveling to that community or knowing the patient or her relatives.

In the absence of a known source of infection, secondary cases, history of transfusion, parenteral drug use, or foreign travel, this case has been classified as cryptic malaria.

(Reported by Stephen Seligman, M.D., Chief, Infectious Disease Section, Department of Medicine, Kings County Hospital, New York; Chung C. Wang, M.D., physician, Division of Tropical Diseases, Pascal J. Imperato, M.D., Director, Bureau of Infectious Disease Control, New York City Health Department; J. N. MacCormack, M.D., Head, Communicable Disease Control Branch, North Carolina Division of Health Services; and an EIS Officer.)

#### Editorial Note

Since this patient was in North Carolina for only 7 days before becoming ill, it is unclear whether she acquired malaria there. The intrinsic incubation period for *P. falciparum* may be as short as 5 days, but the average is approximately 12 days. The extrinsic (mosquito) incubation period is 7-14 days, depending on temperature and humidity. Hence, the children from Zaire could have served as the source of infection, although the distance between their residence and the rural community is considerably greater than the usual 1-mile flying range of mosquitoes. Anophelene vectors of malaria are known to exist in the Raleigh area.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

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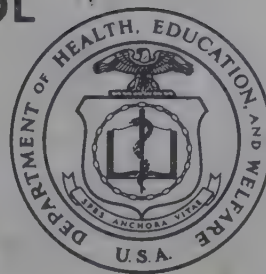
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# Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE

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## EPIDEMIOLOGIC NOTES AND REPORTS

## SALMONELLA AGONA GASTROINTESTINAL ILLNESS

## Arkansas

Between June 29 and July 2, 1973, 3 outbreaks of *Salmonella agona* infection were reported in Little Rock, Arkansas. On June 29, approximately 200 employees of a Little Rock firm attended a company picnic. Within 2 days, 120 of 158 picnickers interviewed developed an illness characterized by diarrhea (93%), abdominal cramps (86%), nausea (69%), headache (65%), fever (62%), chills (61%), dizziness (42%), vomiting (40%), and bloody stools (5%). The median incubation period fell between 12 and 18 hours. Stool samples from 20 symptomatic and 4 asymptomatic persons were all positive for *S. agona*.

On June 30, a wedding reception was held in Little Rock, with an estimated 200 guests attending. Fifty-eight of 126 contacted subsequently developed gastrointestinal illness.

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On the same day, approximately 50 members of a club attended a banquet in the same city, and 12 of 24 interviewed became ill in the ensuing 2 days. In each outbreak, the clustering of times of onset for known cases was consistent with a common-source exposure.

Food histories were obtained from persons present at each of the gatherings. Attack rates among picnic-goers were significantly higher among persons who had consumed at least 1 of 8 different food items at the picnic, including barbecue beef, than among those who had not eaten them (Table 1). Analysis of food-specific attack rates for the 7

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	33rd WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 33 WEEKS		
	August 18, 1973	August 19, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis . . . . .	223	135	202	2,252	1,742	1,790
Brucellosis . . . . .	6	8	5	126	113	131
Chickenpox . . . . .	307	366	— — —	144,253	113,049	— — —
Diphtheria . . . . .	—	1	3	113	63	101
Encephalitis, primary:						
Arthropod-borne and unspecified . . . . .	39	44	44	812	577	667
Encephalitis, post-infectious . . . . .	5	4	8	198	195	272
Hepatitis, serum (Hepatitis B) . . . . .	187	174	150	5,044	5,843	4,554
Hepatitis, infectious (Hepatitis A) . . . . .	878	930	948	31,935	34,901	34,902
Malaria . . . . .	4	6	48	153	651	1,735
Measles (rubeola) . . . . .	89	131	194	23,807	26,480	26,480
Meningococcal infections, total . . . . .	12	21	29	996	963	1,771
Civilian . . . . .	12	20	26	972	925	1,588
Military . . . . .	—	1	—	24	38	183
Mumps . . . . .	375	371	567	54,281	55,665	73,862
Rubella (German measles) . . . . .	117	118	213	25,681	20,240	42,826
Tetanus . . . . .	3	2	3	53	73	73
Tuberculosis, new active . . . . .	507	673	— — —	20,081	21,302	— — —
Tularemia . . . . .	6	3	3	102	86	90
Typhoid fever . . . . .	6	6	6	445	203	193
Typhus, tick-borne (Rky. Mt. spotted fever) . .	27	25	25	462	352	291
Venereal Diseases:						
Gonorrhea . . . . .	18,614	15,994	— — —	509,608	455,458	— — —
Syphilis, primary and secondary . . . . .	503	536	— — —	16,535	15,488	— — —
Rabies in animals . . . . .	64	92	62	2,363	2,807	2,327

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax: . . . . .	1	Poliomyelitis, total: . . . . .	3
Botulism: . . . . .	13	Paralytic: . . . . .	3
Congenital rubella syndrome: . . . . .	19	Psittacosis: Minn.-2 . . . . .	15
Leprosy: Calif.-6 . . . . .	83	Rabies in man: . . . . .	—
Leptospirosis: . . . . .	20	Trichinosis: . . . . .	64
Plague: . . . . .	1	Typhus, murine: . . . . .	25

**SALMONELLA AGONA** — Continued

other suspect foods was performed both for persons who had eaten barbecue beef and for those who had not. This analysis revealed that only 1 item, potato salad, might be significantly implicated independently of coincidental consumption of barbecue beef (Table 2). Food-specific attack rates for the wedding reception also implicated barbecue beef. The barbecue beef was held on a warm steam table at the reception from 4:30 to 10:00 p.m. Attack rates were higher in those eating after 6:00 p.m. (86%) than in those eating before that hour (18%). Barbecue beef was also eaten by 11 of 12 persons known to have been ill after the club banquet.

Samples of the food served at each gathering were cultured. *S. agona* was recovered from barbecue beef served at each of the 3 events as well as from barbecue beans from the picnic. Other leftover foods were negative for enteric pathogens.

Further epidemiologic investigation revealed that food served at each of the functions had been provided by the same barbecue carry-out establishment. Furthermore, 4 persons who had eaten barbecue beef bought over the counter from this store between June 20 and July 1 subsequently became ill and had stool cultures positive for *S. agona*.

When the establishment was visited on July 6, it was learned that the meat for the picnic and wedding reception was first barbecued, then chopped, placed in large pans holding approximately 25 pounds each, and stored in holding ovens for several hours before delivery. Environmental and food cultures obtained on the premises were negative for salmonella, but 6 of 9 employees had stool cultures positive for *S. agona*.

The carry-out restaurant did not routinely sell barbecued chicken, but chickens and turkeys were frequently brought in for barbecuing by individual customers.

Control measures included employee education in proper food handling and in the importance of handwashing to prevent cross-contamination from raw meat and poultry and from feces to cooked food, decreasing the amount of chopped barbecue meat held in each pan, and raising the holding oven temperature. No additional cases of illness connected with food purchased at this establishment since July 1 have occurred. Prospective surveillance has revealed little evidence of

Table 2  
Food-Specific Attack Rates for Persons Attending Company Picnic, by Consumption of Barbecue Beef  
Little Rock, Arkansas — June 29, 1973

Food Item	Ate Barbecue Beef				Did Not Eat Barbecue Beef			
	Not Ill			Attack Rate (Per-cent)	Not Ill			Attack Rate (Per-cent)
Barbecue sauce								
Ate	107	19	126	85	0	0	0	0
Did not eat	5	2	7	71	8	16	24	33
	N.S.*				N.S.			
Potato salad								
Ate	97	14	111	87	2	0	2	100
Did not eat	15	7	22	68	6	16	22	27
	p = 0.03				N.S.			
Barbecue beans								
Ate	102	20	122	84	5	4	9	55
Did not eat	10	1	11	91	3	12	15	20
	N.S.				N.S.			
Cole slaw								
Ate	71	12	83	86	1	1	2	50
Did not eat	41	9	50	82	7	15	22	32
	N.S.				N.S.			
Fried Chicken								
Ate	100	16	116	86	8	14	22	36
Did not eat	12	5	17	71	0	2	2	0
	N.S.				N.S.			
Cheese								
Ate	32	5	37	86	4	2	6	67
Did not eat	80	16	96	83	4	14	18	22
	N.S.				N.S.			
Cookies								
Ate	34	5	39	87	2	1	3	67
Did not eat	78	16	94	83	6	15	21	29
	N.S.				N.S.			

\*N.S. means not statistically significant.

secondary spread in the households of persons affected in the 3 outbreaks.

(Reported by G. Doty Murphy III, M.D., State Epidemiologist, Arkansas State Department of Health; and an EIS Officer.)

**Editorial Note**

The epidemiologic evidence strongly suggests that the food provided by the carry-out establishment to each of the 3 gatherings was contaminated with *S. agona*. The size of the barbecue meat batches placed in the holding ovens may have been too large to permit prompt attainment of high enough temperatures in the middle of each batch. Further incubation of the organisms may have occurred on the steam table at the wedding reception.

The illnesses in customers who purchased food over the counter from the carry-out restaurant indicate that introduction of *S. agona* into the establishment antedated the large outbreaks by at least 9 days. The mode of introduction remains obscure, but poultry, the source of a previous outbreak of *S. agona* infection in Arkansas, brought to the restaurant for barbecuing by individual customers is 1 possibility. The high rate of *S. agona* carriage among food handlers may only reflect their exposure to the contaminated food.

Table 1  
Food-Specific Attack Rates for Persons Attending Company Picnic  
Little Rock, Arkansas — June 29, 1973

Food Item	Ate				Did Not Eat			
	Not Ill			Attack Rate (Per-cent)	Not Ill			Attack Rate (Per-cent)
Barbecue sauce	110	19	129	85	10	22	32	31 <sup>a</sup>
Barbecue beef	112	21	133	84	8	20	28	29 <sup>a</sup>
Potato salad	98	14	112	87	22	27	49	45 <sup>a</sup>
Barbecue beans	107	24	131	82	13	17	30	43 <sup>a</sup>
Cole slaw	74	13	87	85	45	28	73	62 <sup>b</sup>
Fried chicken	108	30	138	78	12	11	23	52 <sup>c</sup>
Cheese	41	6	47	87	79	35	114	69 <sup>d</sup>
Cookies	41	6	47	87	79	35	114	69 <sup>d</sup>
Beer	47	13	60	78	73	28	101	72
Cola	80	28	108	74	40	13	53	75

<sup>a</sup>p < 0.0005

<sup>c</sup>p < 0.025

<sup>b</sup>p < 0.005

<sup>d</sup>p < 0.05

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING AUGUST 18, 1973 AND AUGUST 19, 1972 (33rd WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious*	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES .....	223	6	307	-	113	39	44	5	187	878	930
NEW ENGLAND .....	25	-	23	-	3	1	2	-	7	61	95
Maine*	-	-	-	-	-	-	-	-	-	1	10
New Hampshire *	-	-	-	-	-	-	-	-	1	5	21
Vermont .....	-	-	-	-	-	-	-	-	-	1	2
Massachusetts .....	7	-	10	-	1	1	2	-	3	37	35
Rhode Island .....	12	-	8	-	2	-	-	-	1	10	12
Connecticut .....	6	-	5	-	-	-	-	-	2	7	15
MIDDLE ATLANTIC .....	26	-	30	-	-	7	-	1	31	104	137
Upstate New York .....	2	-	1	-	-	1	-	-	1	32	49
New York City .....	3	-	28	-	-	-	-	-	1	10	26
New Jersey .....	15	-	NN	-	-	-	-	-	10	34	51
Pennsylvania .....	6	-	1	-	-	6	-	1	19	28	11
EAST NORTH CENTRAL .....	46	1	154	-	-	7	18	1	30	129	164
Ohio .....	7	1	63	-	-	3	10	-	11	24	52
Indiana .....	1	-	7	-	-	-	-	-	-	12	14
Illinois .....	3	-	-	-	-	1	1	1	7	27	32
Michigan .....	35	-	25	-	-	3	5	-	11	59	63
Wisconsin .....	-	-	59	-	-	-	2	-	1	7	3
WEST NORTH CENTRAL .....	8	1	22	-	7	-	-	1	9	31	20
Minnesota .....	2	-	1	-	-	-	-	1	4	6	2
Iowa .....	1	-	2	-	-	-	-	-	3	1	2
Missouri *	5	-	17	-	-	-	-	-	2	4	8
North Dakota .....	-	-	2	-	-	-	-	-	-	-	1
South Dakota .....	-	-	-	-	7	-	-	-	-	-	1
Nebraska .....	-	1	-	-	-	-	-	-	-	-	-
Kansas .....	-	-	-	-	-	-	-	-	-	20	6
SOUTH ATLANTIC .....	29	1	37	-	-	9	18	-	10	130	135
Delaware .....	-	-	-	-	-	-	1	-	-	2	6
Maryland .....	4	-	5	-	-	2	1	-	-	11	8
District of Columbia .....	1	-	3	-	-	-	-	-	-	3	-
Virginia .....	5	1	3	-	-	-	2	-	2	16	40
West Virginia .....	5	-	20	-	-	2	-	-	-	6	10
North Carolina .....	3	-	NN	-	-	-	-	-	-	15	17
South Carolina .....	5	-	6	-	-	3	10	-	-	13	7
Georgia .....	1	-	-	-	-	-	3	-	-	12	20
Florida .....	5	-	-	-	-	2	1	-	8	52	27
EAST SOUTH CENTRAL .....	15	-	13	-	-	2	-	-	11	60	49
Kentucky .....	3	-	8	-	-	-	-	-	1	26	23
Tennessee .....	2	-	NN	-	-	-	-	-	1	19	20
Alabama .....	10	-	5	-	-	2	-	-	8	14	5
Mississippi .....	-	-	-	-	-	-	-	-	1	1	1
WEST SOUTH CENTRAL .....	13	2	11	-	11	2	-	-	14	121	70
Arkansas*	-	-	-	-	-	-	-	-	-	1	5
Louisiana *	4	-	NN	-	-	-	-	-	8	19	6
Oklahoma .....	4	1	1	-	-	1	-	-	-	12	8
Texas*	5	1	10	-	11	1	-	-	6	89	51
MOUNTAIN .....	3	-	7	-	14	1	2	-	1	30	62
Montana .....	-	-	4	-	-	1	2	-	-	3	7
Idaho .....	3	-	-	-	-	-	-	-	-	7	6
Wyoming .....	-	-	-	-	-	-	-	-	-	-	-
Colorado .....	-	-	2	-	-	-	-	-	1	4	17
New Mexico .....	-	-	1	-	6	-	-	-	-	6	6
Arizona*	-	-	-	-	8	-	-	-	-	1	8
Utah .....	-	-	-	-	-	-	-	-	-	2	16
Nevada .....	-	-	-	-	-	-	-	-	-	7	2
PACIFIC .....	58	1	10	-	78	10	4	2	74	212	198
Washington .....	4	-	4	-	70	-	-	-	8	20	9
Oregon .....	1	-	-	-	3	-	-	-	7	17	28
California .....	53	1	-	-	3	10	4	2	53	172	146
Alaska .....	-	-	5	-	2	-	-	-	5	1	3
Hawaii .....	-	-	1	-	-	-	-	-	1	2	12
Guam .....	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	-	1	-	-	-	-	-	1	24	18
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: N. H. 3, Ark. 3  
 Brucellosis: Ark. 1  
 Chickenpox: Tex. 26

Encephalitis, primary: Mo. delete 1  
 Hepatitis A: Me. 1, Ark. 10, La. delete 1, Ariz. 9

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING AUGUST 18, 1973 AND AUGUST 19, 1972 (33rd WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1972	Cum. 1972	1972	Cumulative		1972	Cumulative		1972	Cum. 1972	1972	Cum. 1972
				1972	1971		1972	1971				
UNITED STATES .....	4	153	89	23,807	26,480	12	996	963	375	54,281	117	25,681
NEW ENGLAND .....	—	12	7	7,357	3,074	—	46	39	17	2,761	6	3,592
Maine *	—	—	—	64	243	—	1	3	3	310	—	68
New Hampshire *	—	—	—	857	228	—	6	3	—	186	1	355
Vermont .....	—	2	—	118	125	—	3	—	—	241	1	44
Massachusetts .....	—	6	6	3,918	677	—	12	18	5	810	—	2,034
Rhode Island .....	—	—	—	603	519	—	3	10	7	325	2	212
Connecticut .....	—	4	1	1,797	1,282	—	21	5	2	889	2	879
MIDDLE ATLANTIC .....	1	22	11	2,402	963	1	133	119	55	7,098	11	4,153
Upstate New York .....	1	13	2	789	124	—	46	32	NN	NN	5	414
New York City .....	—	1	9	879	300	—	27	36	44	4,446	5	454
New Jersey .....	—	4	---	389	484	1	32	24	5	1,476	---	2,997
Pennsylvania .....	—	4	—	345	55	—	28	27	6	1,176	1	288
EAST NORTH CENTRAL .....	—	21	32	8,387	10,897	—	126	141	82	14,038	44	5,859
Ohio .....	—	4	—	278	236	—	56	56	17	2,657	4	681
Indiana .....	—	3	1	619	1,228	—	4	11	9	1,163	4	928
Illinois .....	—	11	11	2,023	4,056	—	24	30	20	2,375	23	934
Michigan .....	—	3	6	4,336	1,971	—	37	38	11	3,883	4	1,810
Wisconsin .....	—	—	14	1,131	3,406	—	5	6	25	3,960	9	1,506
WEST NORTH CENTRAL .....	1	7	—	436	935	1	78	68	13	4,580	4	1,201
Minnesota .....	—	1	—	19	19	—	7	19	—	79	2	221
Iowa .....	—	1	—	277	651	—	18	2	3	2,791	1	187
Missouri .....	—	1	—	49	162	1	32	20	6	666	1	260
North Dakota .....	—	1	—	58	52	—	3	—	2	66	—	276
South Dakota .....	—	—	—	—	6	—	4	2	—	17	—	23
Nebraska .....	—	1	—	6	18	—	7	9	2	125	—	139
Kansas .....	1	2	—	27	27	—	7	16	—	836	—	95
SOUTH ATLANTIC .....	—	23	10	1,187	2,110	3	165	218	44	6,398	6	2,076
Delaware .....	—	—	—	8	48	—	—	1	2	264	—	13
Maryland .....	—	3	—	12	15	—	22	33	7	622	—	10
District of Columbia .....	—	1	—	5	2	—	4	9	7	102	—	3
Virginia .....	—	5	3	414	60	1	30	48	6	680	1	622
West Virginia .....	—	—	3	193	266	—	2	7	5	2,213	—	283
North Carolina .....	—	6	—	4	33	—	36	27	NN	NN	—	201
South Carolina .....	—	1	1	58	214	1	11	20	1	350	—	84
Georgia .....	—	3	1	149	166	1	21	15	—	29	—	11
Florida .....	—	4	2	344	1,306	—	39	58	16	2,138	5	849
EAST SOUTH CENTRAL .....	1	6	2	594	1,031	—	91	77	56	4,406	17	1,280
Kentucky .....	—	1	2	366	519	—	32	25	6	1,284	9	389
Tennessee .....	—	—	—	165	191	—	37	28	30	2,032	6	511
Alabama .....	1	5	—	9	140	—	15	16	20	634	2	186
Mississippi .....	—	—	—	54	181	—	7	8	—	456	—	194
WEST SOUTH CENTRAL .....	—	9	5	645	1,436	3	156	119	42	3,608	6	1,431
Arkansas .....	—	—	—	69	13	—	13	9	6	351	—	112
Louisiana .....	—	2	—	84	82	2	33	35	2	77	—	99
Oklahoma .....	—	1	—	52	10	—	27	6	4	425	2	177
Texas .....	—	6	5	440	1,331	1	83	69	30	2,755	4	1,043
MOUNTAIN .....	—	9	7	588	1,750	—	31	18	14	2,413	6	2,360
Montana .....	—	1	—	16	15	—	6	2	3	225	2	502
Idaho .....	—	—	4	252	24	—	4	5	—	110	2	35
Wyoming .....	---	—	---	80	51	---	—	1	---	420	---	6
Colorado .....	—	2	1	103	519	—	11	4	5	428	2	1,541
New Mexico .....	—	2	2	118	115	—	3	2	1	956	—	188
Arizona .....	—	4	—	16	871	—	3	1	—	140	—	17
Utah .....	—	—	—	2	155	—	2	2	5	126	—	68
Nevada .....	—	—	—	1	—	—	2	1	—	8	—	3
PACIFIC .....	1	44	15	2,211	4,284	4	170	164	52	8,979	17	3,729
Washington .....	—	3	6	1,008	973	—	17	15	—	1,406	—	652
Oregon .....	—	2	1	454	129	—	12	13	8	1,665	6	780
California .....	1	36	8	665	3,076	4	135	127	42	4,981	11	2,262
Alaska .....	—	2	—	65	11	—	6	6	—	679	—	9
Hawaii .....	—	1	—	19	95	—	—	3	2	248	—	26
Guam .....	—	—	—	26	8	—	—	11	—	17	—	8
Puerto Rico .....	—	—	6	1,757	614	1	8	4	6	660	—	26
Virgin Islands .....	—	—	—	—	2	—	—	2	—	21	—	2

\*Delayed reports: Mumps: Me. 1, N. H. 8

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING AUGUST 18, 1973 AND AUGUST 19, 1972 (33rd WEEK) – Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES . . . . .	53	507	20,081	102	6	445	27	462	18,614	503	64	2,363
NEW ENGLAND . . . . .	2	21	693	—	—	8	—	1	541	4	2	98
Maine . . . . .	—	5	59	—	—	—	—	—	27	1	—	55
New Hampshire . . . . .	—	2	41	—	—	—	—	—	18	—	1	34
Vermont . . . . .	—	1	20	—	—	—	—	—	9	—	—	3
Massachusetts . . . . .	—	7	360	—	—	8	—	1	285	3	1	5
Rhode Island . . . . .	1	5	52	—	—	—	—	—	49	—	—	—
Connecticut . . . . .	1	1	161	—	—	—	—	—	153	—	—	1
MIDDLE ATLANTIC . . . . .	7	74	3,906	—	2	42	3	27	2,763	118	6	32
Upstate New York . . . . .	1	3	698	—	—	6	1	13	325	3	4	14
New York City . . . . .	3	35	1,484	—	1	15	2	3	1,188	61	—	—
New Jersey . . . . .	2	11	668	—	—	12	—	5	366	16	—	—
Pennsylvania . . . . .	1	25	1,056	—	1	9	—	6	884	38	2	18
EAST NORTH CENTRAL . . . . .	8	67	3,049	2	1	25	—	17	2,463	20	11	226
Ohio *. . . . .	1	20	904	—	1	10	—	13	943	1	—	29
Indiana . . . . .	1	12	399	—	—	—	—	—	312	5	1	48
Illinois . . . . .	3	2	911	—	—	6	—	4	386	8	3	61
Michigan . . . . .	1	33	758	2	—	7	—	—	640	5	—	4
Wisconsin . . . . .	2	—	77	—	—	2	—	—	182	1	7	84
WEST NORTH CENTRAL . . . . .	4	30	816	10	1	18	2	16	1,006	12	14	754
Minnesota . . . . .	—	7	103	—	—	4	—	—	170	5	10	266
Iowa . . . . .	—	5	89	—	—	—	—	7	190	1	1	152
Missouri . . . . .	3	10	375	10	—	9	1	7	343	5	2	70
North Dakota . . . . .	1	—	28	—	—	—	—	—	31	—	1	123
South Dakota . . . . .	—	4	58	—	—	1	—	—	33	1	—	77
Nebraska . . . . .	—	3	52	—	—	1	1	2	133	—	—	3
Kansas . . . . .	—	1	111	—	1	3	—	—	106	—	—	63
SOUTH ATLANTIC . . . . .	10	126	3,999	9	1	231	12	231	4,441	173	3	194
Delaware . . . . .	—	—	53	—	—	—	—	7	77	2	—	3
Maryland . . . . .	—	9	426	—	—	6	1	10	383	20	1	10
District of Columbia . . . . .	—	8	180	—	—	—	—	—	410	12	—	—
Virginia . . . . .	2	21	529	3	—	3	3	49	525	36	—	58
West Virginia . . . . .	—	4	184	—	—	2	1	3	66	—	—	18
North Carolina . . . . .	—	25	648	1	—	4	7	103	906	3	—	1
South Carolina . . . . .	—	1	341	—	—	4	—	26	374	42	—	4
Georgia . . . . .	1	26	666	3	—	1	—	33	741	18	2	66
Florida . . . . .	7	32	972	2	1	211	—	—	959	40	—	34
EAST SOUTH CENTRAL . . . . .	7	42	1,820	7	1	20	5	72	1,581	18	3	350
Kentucky . . . . .	1	10	427	1	—	3	—	—	182	8	1	189
Tennessee . . . . .	4	12	563	5	—	9	4	35	641	6	2	122
Alabama . . . . .	2	16	488	—	—	2	1	10	552	—	—	38
Mississippi . . . . .	—	4	342	1	1	6	—	27	206	4	—	1
WEST SOUTH CENTRAL . . . . .	8	48	2,057	72	—	20	5	83	2,456	68	4	436
Arkansas*. . . . .	—	9	247	50	—	3	—	12	174	1	1	91
Louisiana *. . . . .	3	4	330	—	—	6	—	—	564	27	—	34
Oklahoma . . . . .	3	6	176	17	—	2	1	64	289	2	—	134
Texas*. . . . .	2	29	1,304	5	—	9	4	7	1,429	38	3	177
MOUNTAIN . . . . .	—	16	642	1	—	8	—	8	474	4	1	23
Montana . . . . .	—	2	31	—	—	—	—	1	39	—	—	—
Idaho . . . . .	—	—	26	—	—	—	—	2	117	—	—	—
Wyoming*. . . . .	—	---	18	—	---	1	---	1	---	---	---	—
Colorado . . . . .	—	—	120	—	—	1	—	1	90	3	—	—
New Mexico . . . . .	—	—	140	1	—	2	—	3	45	—	—	4
Arizona . . . . .	—	12	238	—	—	4	—	—	141	1	1	19
Utah . . . . .	—	2	27	—	—	—	—	—	42	—	—	—
Nevada . . . . .	—	—	42	—	—	—	—	—	—	—	—	—
PACIFIC . . . . .	7	83	3,099	1	—	73	—	7	2,889	86	20	250
Washington . . . . .	2	3	251	—	—	6	—	4	278	3	1	4
Oregon . . . . .	1	2	167	—	—	2	—	2	263	—	—	6
California . . . . .	4	71	2,433	1	—	63	—	1	2,294	83	18	232
Alaska . . . . .	—	—	67	—	—	1	—	—	15	—	1	8
Hawaii . . . . .	—	7	181	—	—	1	—	—	39	—	—	—
Guam . . . . .	—	—	28	—	—	—	—	—	—	—	—	—
Puerto Rico . . . . .	4	7	305	—	4	7	—	—	124	9	—	35
Virgin Islands . . . . .	—	—	1	—	—	—	—	—	—	—	—	—

\*Delayed reports: TB: Ohio delete 4  
Tularemia: Ark. 3  
Gonorrhea: La. delete 8

Syphilis: La. delete 1, Wyo. delete 1  
Rabies: La. delete 1, Tex. 6

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING AUGUST 18, 1973

Week No.

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

33

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	744	478	28	43	SOUTH ATLANTIC	1,282	655	51	44
Boston, Mass.	204	117	15	5	Atlanta, Ga.	162	68	6	4
Bridgeport, Conn.	47	29	—	3	Baltimore, Md.	230	107	17	8
Cambridge, Mass.	23	17	—	6	Charlotte, N. C.	78	42	2	1
Fall River, Mass.	24	19	—	—	Jacksonville, Fla.	69	39	2	—
Hartford, Conn.	62	36	3	1	Miami, Fla.	117	61	3	6
Lowell, Mass.	31	21	—	3	Norfolk, Va.	65	27	2	2
Lynn, Mass.	17	14	—	—	Richmond, Va.	85	44	3	3
New Bedford, Mass.	32	24	—	4	Savannah, Ga.	44	26	2	5
New Haven, Conn.	64	41	4	1	St. Petersburg, Fla.	91	71	4	5
Providence, R. I.	63	34	1	5	Tampa, Fla.	80	39	2	3
Somerville, Mass.	12	9	—	1	Washington, D. C.	215	103	5	7
Springfield, Mass.	58	41	—	6	Wilmington, Del.	46	28	3	—
Waterbury, Conn.	43	33	—	—	EAST SOUTH CENTRAL	647	342	17	22
Worcester, Mass.	64	43	5	8	Birmingham, Ala.	94	47	3	1
MIDDLE ATLANTIC	3,017	1,831	88	142	Chattanooga, Tenn.	55	22	4	6
Albany, N. Y.	56	31	2	1	Knoxville, Tenn.	22	16	1	—
Allentown, Pa.	30	25	—	3	Louisville, Ky.	109	70	4	7
Buffalo, N. Y.	136	81	7	10	Memphis, Tenn.	167	78	3	2
Camden, N. J.	27	17	—	1	Mobile, Ala.	58	30	—	1
Elizabeth, N. J.	26	15	—	1	Montgomery, Ala.	40	23	—	1
Erie, Pa.	39	29	—	1	Nashville, Tenn.	102	56	2	4
Jersey City, N. J.	64	39	2	6	WEST SOUTH CENTRAL	1,129	566	60	33
Newark, N. J.	77	39	6	3	Austin, Tex.	41	24	2	—
New York City, N. Y. †	1,404	838	35	56	Baton Rouge, La.	—	—	—	—
Paterson, N. J.	32	14	1	1	Corpus Christi, Tex.	40	22	5	2
Philadelphia, Pa.	505	294	16	26	Dallas, Tex.	162	78	9	6
Pittsburgh, Pa.	176	107	6	7	El Paso, Tex.	32	14	—	2
Reading, Pa.	43	31	—	4	Fort Worth, Tex.	90	51	5	4
Rochester, N. Y.	134	89	6	9	Houston, Tex.	253	112	12	2
Schenectady, N. Y.	25	16	—	—	Little Rock, Ark.	35	18	2	1
Scranton, Pa.	52	39	2	2	New Orleans, La.	128	59	6	—
Syracuse, N. Y.	82	55	2	2	Oklahoma City, Okla. *	79	42	4	2
Trenton, N. J.	50	30	2	2	San Antonio, Tex.	154	80	12	1
Utica, N. Y.	26	18	1	2	Shreveport, La.	63	34	1	5
Yonkers, N. Y.	33	24	—	5	Tulsa, Okla.	52	32	2	8
EAST NORTH CENTRAL	2,513	1,389	123	75	MOUNTAIN	489	269	16	12
Akron, Ohio	67	41	3	—	Albuquerque, N. Mex.	68	27	1	5
Canton, Ohio	45	27	—	—	Colorado Springs, Colo.	29	17	1	1
Chicago, Ill.	695	375	38	23	Denver, Colo.	98	55	1	1
Cincinnati, Ohio	147	92	8	4	Las Vegas, Nev.	18	8	—	2
Cleveland, Ohio	181	99	10	3	Ogden, Utah	22	13	2	1
Columbus, Ohio	138	81	4	5	Phoenix, Ariz.	101	56	8	1
Dayton, Ohio	80	42	5	1	Pueblo, Colo.	17	13	—	1
Detroit, Mich.	356	181	22	8	Salt Lake City, Utah	55	43	2	—
Evansville, Ind.	38	21	2	1	Tucson, Ariz.	81	37	1	—
Fort Wayne, Ind.	54	26	2	4	PACIFIC	1,591	995	51	32
Gary, Ind.	22	8	1	—	Berkeley, Calif.	17	10	—	—
Grand Rapids, Mich.	46	32	2	4	Fresno, Calif.	54	27	2	3
Indianapolis, Ind.	168	85	8	4	Glendale, Calif.	26	20	—	—
Madison, Wis.	51	33	4	3	Honolulu, Hawaii	60	31	4	—
Milwaukee, Wis.	146	93	3	2	Long Beach, Calif.	91	51	3	1
Peoria, Ill.	27	19	3	2	Los Angeles, Calif.	558	357	15	7
Rockford, Ill.	28	20	—	2	Oakland, Calif.	77	54	2	—
South Bend, Ind.	47	26	2	3	Pasadena, Calif.	30	23	—	—
Toledo, Ohio	108	49	5	4	Portland, Oreg.	123	81	4	3
Youngstown, Ohio	69	39	1	2	Sacramento, Calif.	59	31	1	—
WEST NORTH CENTRAL	762	470	29	21	San Diego, Calif.	105	62	3	1
Des Moines, Iowa	51	33	1	—	San Francisco, Calif.	139	85	5	3
Duluth, Minn.	22	18	—	1	San Jose, Calif.	57	39	—	2
Kansas City, Kans.	27	14	3	1	Seattle, Wash.	99	60	6	2
Kansas City, Mo.	125	75	6	2	Spokane, Wash.	50	30	5	5
Lincoln, Nebr.	23	15	1	—	Tacoma, Wash.	46	34	1	5
Minneapolis, Minn.	89	62	2	—	Total	12,174	6,995	463	424
Omaha, Nebr.	103	68	7	1	Expected Number	12,105	6,837	549	392
St. Louis, Mo.	195	110	3	8	Cumulative Total (includes reported corrections for previous weeks)	429,434	252,792	15,960	17,710
St. Paul, Minn.	58	33	2	—					
Wichita, Kans.	69	42	4	8					

†Delayed report for week ending August 11, 1973  
\*Estimate based on average percent of divisional total

## EASTERN EQUINE ENCEPHALOMYELITIS — New Hampshire, Michigan

## New Hampshire

On August 1, 1973, workers at a pheasant farm in Brentwood, New Hampshire, approximately 15 miles from the Atlantic Ocean, noted that several birds had an illness, characterized by a staggering gait and progressive stupor, which caused death within 1 day. Birds at the farm are presently dying at the rate of approximately 50 per day. In the past 2 weeks, several horses within a 15-mile radius of Brentwood have also become ill with an encephalitis-like disease; 23 have died. Pathologic examination of the brains of 11 of these horses has been compatible with acute viral encephalitis. Specimens from 2 horses were positive for eastern equine encephalomyelitis (EEE) virus. No concurrent human cases have been reported.

Local observers have noted exceptionally heavy rainfall in southeastern New Hampshire this year. Consequently, a large amount of standing water remained in the area, and mosquito breeding has increased, with *Aedes vexans* the most predominant species. Unseasonably hot weather during the past 2 weeks has also contributed to more rapid mosquito breeding.

(Reported by Daniel Burbank, D.V.M., private veterinarian, Kingston, New Hampshire; Clarence Dearborn, D.V.M., State Veterinarian, Vlasdas Kaupas, M.D., Director, Bureau of Communicable Disease Control, Hugh Wilkerson, M.D., Acting State Health Officer, Gerald Deiller, Commissioner, New Hampshire State Department of Health and Welfare; USDA Veterinary Services Diagnostic Laboratory, Ames, Iowa.)

## Michigan

Since August 9, 1973, 10 horses in Michigan have become ill with an acute encephalitis; 9 died within 48 hours after onset of illness. Serologic specimens from the 1 surviving horse were positive for EEE infection. Pathologic examination of specimens of the brains from the 9 dead horses were consistent with acute viral encephalitis. Eight of these horses were kept along a 6-mile section of a single road in Oakland County, Michigan. The other 2 cases occurred in horses from Kalamazoo, Michigan, and Allegan County. All cases have occurred near swampy areas. Larger mosquito populations have been reported throughout the state this year than in previous years.

No confirmed human cases of arboviral encephalitis have been recorded in Michigan this year; however, 102 cases of undiagnosed primary encephalitis in humans have been reported so far in 1973, compared with a total of 108 in 1972.

(Reported by A. L. Trapp, D.V.M., Veterinary Pathologist, Michigan State University; John Quinn, D.V.M., State Veterinarian, Donald Coohon, D.V.M., Director, Division of Disease Control, Norman Hayner, M.D., State Epidemiologist, Michigan Department of Public Health.)

## Editorial Note

Epizootics of EEE have not been reported previously from New Hampshire. The last report of EEE activity in Michigan was in 1945.

## HEPATITIS-A AMONG MILITARY PERSONNEL — Turkey

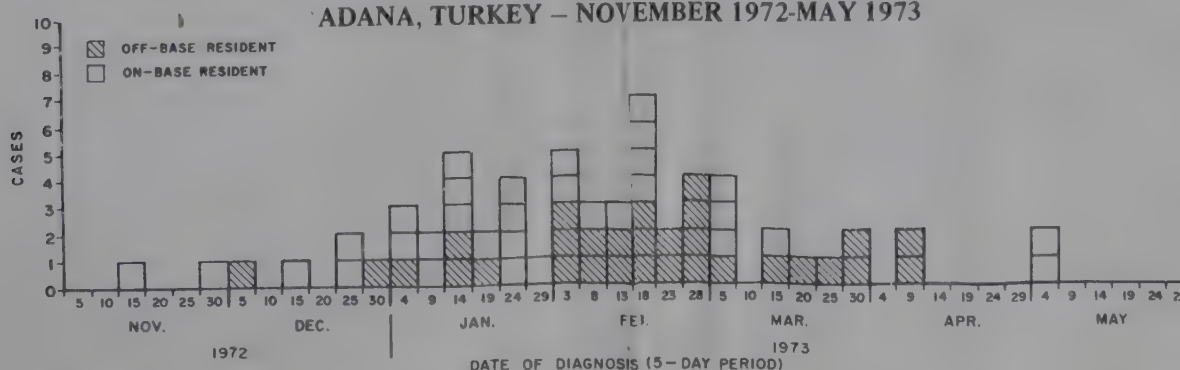
Between November 1, 1972, and May 4, 1973, a total of 62 cases of hepatitis-A were discovered among military personnel, dependents, and civilian employees at the United States Air Force Incirlick Common Defense Installation (CDI) near Adana, Turkey (Figure 1). The incidence of the disease for the 4-month period, December 1972-February 1973, was 2.5 cases/1,000/month, 26 times greater than the incidence reported for the preceding 12 months. The diagnosis of hepatitis was based on characteristic symptomatology, including fever, malaise, fatigue, nausea, vomiting, right upper quadrant abdominal pain, jaundice or dark urine, and elevated bilirubin and SGOT levels. Twenty-one persons were hospitalized, and 27 were treated as outpatients. Over 54% of the patients were 15 years of age or younger. The peak incidence of the disease in this age group occurred between late January and early February 1973; the peak incidence in adults followed approximately 30 days later.

At the time of the investigation in February, 8 of the ill individuals represented secondary cases within families. The interval between diagnosis of hepatitis in 1 family member and subsequent onset of the disease in a second ranged from 9 to 26 days (mean 16.4 days).

Analysis of attack rates by age, marital status, and place of residence revealed that: 1) illness among school children both off and on base peaked at the same time in January and February, 2) unmarried on-base personnel were the least affected of all groups (incidence rate 0.9 cases/1,000/month), and 3) unmarried off-base personnel had the highest rate of illness (11.4 cases/1,000/month) of any group.

These data suggested that 2 groups were at high risk of acquiring infection: school children and off-base personnel. The clustering of cases among school children (both on and off base) during January and February 1973 suggested a common source of infection at the school with a large number

Figure 1

HEPATITIS-A CASES BY DATE OF DIAGNOSIS  
INCIRLICK COMMON DEFENSE INSTALLATION  
ADANA, TURKEY — NOVEMBER 1972-MAY 1973

## HEPATITIS-A — Continued

of secondary cases among parents and siblings. There was no evidence of water or food impurity at the school; however, there were 3 episodes of raw sewage overflow near the school in the 6 weeks preceding the outbreak. On December 14, January 14, and January 27-28, raw sewage was diverted from a dysfunctioning pumping station to an open drainage ditch adjacent to the elementary school playground and was finally discharged off base. The school children played in the drainage ditch area and may have been infected by direct contact with raw sewage.

It appeared that the cases among off-base personnel, especially unmarried personnel, may have been related to another source. Thirteen of 19 municipal water samples collected from American residencies off base were positive for coliform organisms; measurable chlorine residuals were not detected at any sampling location.

Possibly, municipal water impurity accounted for ongoing

ing cases among off-base personnel. Since the investigation was restricted to persons associated with the military installation, data concerning cases of hepatitis among other groups exposed to the municipal water supply could not be obtained.

Recommended control measures included a vigorous health education program, routine surveillance of the water supply, and complete repair or replacement of the sewage system at the installation.

(Reported by Lt. Col. Claude L. McFarlane, USAF, MC, Flight Surgeon, Lt. Col. Charles L. Darling, USAF, BSC, Microbiologist, Maj. Marlan J. Humerickhouse, USAF, BSC, Bioenvironmental Engineer, Maj. Allen Hall III, USAF, VC, Veterinary Pathologist, CMSgt Kenneth E. Gorrell, Preventive Med. Superintendent, MSgt Eugene D. Dinger, Laboratory Superintendent, MSgt John E. Kielty, Veterinary Technician, and Sgt. William S. Lehrer, Medical Administrative Specialist, Incirlick CDI, Turkey.)

FOLLOW-UP ON NOSOCOMIAL *PSEUDOMONAS SPP.* BACTEREMIAS

No additional cases of bacteremia have been documented as having been associated with infusion of albumin (Probumin-25%, Lederle Laboratories Division, American Cyanamid Company). Epidemiologic studies of other hospitals using this product continue. Separate cultures of albumin and stopper of 1 of 54 bottles on test for 9 days (MMWR, Vol. 22, No. 32) have shown a gram-negative rod that has been presumptively identified as *Pseudomonas cepacia* (previously known as *P. multivorans*, *P. kingii*, or EO-1). Both isolates are sensitive to tetracycline, chloramphenicol, and nalidixic acid and resistant to ampicillin, carbenicillin, gentamicin, kanamycin, streptomycin, nitrofurans, polymyxins, and cephalothin.

(Reported by the Bacterial Diseases Branch, Bureau of Epidemiology, CDC.)

## Erratum, Vol. 22, No. 32, p. 275

In the article, "Arthropod-borne Virus Disease and Surveillance — California, Southeastern United States," under the heading Southeastern United States, first paragraph, eighth line, correct the number of horse deaths reported by Florida from 56 to 46.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to:

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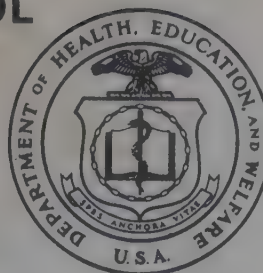
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# Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE

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## EPIDEMIOLOGIC NOTES AND REPORTS TYPE C STAPHYLOCOCCAL ENTEROTOXIN GASTROENTERITIS - Tennessee

On July 26-27, 1973, approximately 725 incoming freshmen, 475 parents, and 150 faculty and administration staff attended summer pre-registration activities at a large state university in Johnson City, Tennessee. On July 27, several hours after a box lunch was served between 12:00 and 1:00 p.m., an estimated 300 persons experienced the onset of vomiting and diarrhea, and 84 were subsequently admitted to the nearby community hospital emergency room. Two adults and 1 student had documented hypotension responsive to intravenous fluids. All but 4 patients were released the same evening.

From the 725 students who registered, a sample of 198 students (27%) and their families were randomly chosen for a telephone survey; 22 students and 45 parents with gastrointestinal symptoms were identified. For those eating the

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box lunch, the attack rate was 27.5% for students and 50.6% for parents. For those not eating the box lunch, the attack rate was 0%. Symptoms included nausea (76%), cramps (71%), diarrhea (67%), vomiting (44%), chills (25%), fever (25%), and collapse (9%). The incubation period in 98% of cases was between 1 and 10 hours; the median was 4½ hours. Those whose symptoms included nausea and vomiting tended to have shorter incubation periods than those with diarrhea. Forty percent of those ill sought medical attention. The median duration of illness was 5 hours for students and 7.5

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	34th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 34 WEEKS		
	August 25, 1973	August 26, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	182	184	184	2,436	1,926	1,957
Brucellosis	2	7	6	128	120	134
Chickenpox	244	306	---	144,499	113,355	---
Diphtheria	1	—	6	114	63	106
Encephalitis, primary:						
Arthropod-borne and unspecified	51	38	35	862	615	697
Encephalitis, post-infectious	6	5	6	204	200	274
Hepatitis, serum (Hepatitis B)	160	159	159	5,207	6,002	4,720
Hepatitis, infectious (Hepatitis A)	893	1,119	1,119	32,840	36,020	36,021
Malaria	5	13	33	158	664	1,801
Measles (rubeola)	70	171	171	23,877	26,651	26,651
Meningococcal infections, total	14	7	30	1,009	970	1,807
Civilian	14	7	29	985	932	1,623
Military	—	—	1	24	38	184
Mumps	268	326	504	54,556	55,991	74,482
Rubella (German measles)	82	149	201	25,761	20,389	43,076
Tetanus	5	1	2	58	74	75
Tuberculosis, new active	509	674	---	20,612	21,976	---
Tularemia	5	5	4	107	91	92
Typhoid fever	15	21	8	460	224	201
Typhus, tick-borne (Rky. Mt. spotted fever)	23	25	15	488	377	306
Veneral Diseases:						
Gonorrhea	17,228	18,544	---	527,091	474,002	---
Syphilis, primary and secondary	381	532	---	16,917	16,020	---
Rabies in animals	62	63	63	2,426	2,870	2,393

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	3
Botulism:	13	Paralytic:	3
Congenital rubella syndrome:	19	Psittacosis:	15
Leprosy: Calif.-2	85	Rabies in man:	—
Leptospirosis: Tenn.-1, Va.-1	22	Trichinosis:	64
Plague:	1	Typhus, murine:	25

## GASTROENTERITIS — Continued

hours for parents. Of the 150 faculty given free tickets to the box lunch, 84 ate the lunch and 47.7% of those became ill.

Food-specific attack rates implicated macaroni salad (Table 1). Chicken could not be excluded as a vehicle of transmission because all but 1 of the individuals ate chicken. No other foods were significantly associated with illness.

The macaroni was cooked and rinsed on July 25 and refrigerated overnight. On July 26, between 10 a.m. and 2 p.m., celery, fresh green peppers, onions, and canned red peppers were hand-sliced, chopped mechanically, and hand-mixed with the macaroni and commercial dressing that did not contain egg. The salad was placed into 30-lb closed plastic containers in a walk-in cooler overnight. At 6:00 a.m. on July 27, it was taken out of storage, and from 6:30 a.m. to 12:20 p.m. individual portions were served into styrofoam boxes, which were transported in large groups to eating areas. The lunches were kept at room temperature during this time.

Examination of portions of macaroni salad from unused trays left at room temperature until 7-8 p.m. revealed  $10^4$ – $10^5$  coagulase-positive staphylococci per gram and  $10^6$ – $10^9$  enterococci per gram. The chicken contained small numbers of coagulase-positive staphylococci. The staphylococci isolated from these foods were nontypable on bacteriophage testing.

Twenty-four kitchen workers were interviewed, and culture specimens from anterior nares, back of wrist, and rectum were obtained on August 2. Four workers had nontypable staphylococci isolated from wrists or nares. Antibiotic sensitivity testing of nontypable organisms from 2 workers and the macaroni salad revealed all to be multiply sensitive. One of these workers was directly involved in the preparation and serving of the macaroni salad. The ability of the strains found in food and workers to produce enterotoxin is being tested.

The remaining macaroni salad available for direct enterotoxin assay was culture-negative and gram-strain negative for staphylococci; however, it contained type C staphylococcal enterotoxin.

(Reported by John P. Lamb, Jr., Dean, College of Health, Donald A. Schiemann, Ph.D., Associate Professor, School of Environmental Health, D. P. Culp, Ph.D., President, East Tennessee State University; Thomas P. Potter, M.D., Director, Department of Pathology, and staff of the Memorial Hospital, Johnson City; Lawrence Moffatt, M.D., Health Officer, Joseph Lynch, Environmentalist, Bette Gurnt, Health Educator, Washington County Health Department; Ernest J. Bernard, Director, Johnson City Branch, State Laboratory, G. Reza Najem, M.D., Ph.D., Director, Division of Preventive Health Services, Robert H. Hutcheson, Jr., M.D., Director, Bureau of Personal Health Services, Tennessee Department of Health; Food and Drug Administration; the Epidemiologic Services Laboratory,

Table 1  
Attack Rates Among Students and Parents Who Ate  
and Did Not Eat Macaroni Salad  
Johnson City, Tennessee — July 27, 1973

	Ate Macaroni			Did Not Eat Macaroni			
	Ill	Not Ill	Percent Ill	Ill	Not Ill	Percent Ill	
Students	22	30	42.3	0	28	0	$X^2=14.3$ $p < .001$
Parents	42	31	57.6	2	13	13.3	$X^2= 8$ $p < .01$

the Enteric Diseases Section, Bacterial Diseases Branch, Bureau of Epidemiology, CDC.)

## Editorial Note

The source of the inoculum in this outbreak was probably 1 of the 2 food handlers whose nontypable staphylococci demonstrated an antibiogram identical to that in the incriminated food. These combined characteristics are unusual and therefore useful markers for epidemiologic purposes. The presence of staphylococci among foodhandlers is common and unavoidable, and prevention of staphylococcal outbreaks depends primarily upon not allowing food temperatures to remain between 40°F and 140°F for more than 3-4 hours (1). The 6- to 10-hour period during which the implicated macaroni salad was left at room temperature prior to consumption was sufficient to allow rapid growth of enterotoxin-producing staphylococci. The presence of enterotoxin in a culture-negative food specimen again demonstrates the value of enterotoxin extraction in confirming the etiology of foodborne outbreaks.

The frequency of vomiting in this outbreak is lower than that normally encountered in staphylococcal intoxication. This may be related to the type of enterotoxin causing the outbreak; type C enterotoxin is rarely associated with foodborne illness, and the symptom complex it causes has not been sufficiently defined (2,3).

Of interest is the finding of high numbers of enterococci in the incriminated food. The possible role of this organism in modifying the symptom complex is not clear (4).

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## DEATH DUE TO TRICHINOSIS — Ohio

On March 11, 1973, a 30-year-old woman in Perry County, Ohio, became ill with fever, chills, malaise, and periorbital edema. She was hospitalized 3 days later. The patient had an 8% eosinophilia, and her serum was positive for trichinosis antibody by the trichinosis bentonite flocculation test. Muscle biopsy demonstrated severe muscle necrosis and phagocytosis with inflammatory myopathy. Non-encysted larvae of *Trichinella spiralis* were also observed. The patient

remained in the hospital until her death on April 15.

On approximately March 18, the patient's 13-year-old son developed mild symptoms compatible with trichinosis and was hospitalized. Antibody to *T. spiralis* was demonstrated by the trichinosis bentonite flocculation test.

Investigation revealed that on several occasions between February 15 and March 5, both the patient and her son had

(Continued on page 291)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING AUGUST 25, 1973 AND AUGUST 26, 1972 (34th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
	1973	1973	1973	1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES .....	182	2	244	1	114	51	38	6	160	893	1,119
NEW ENGLAND .....	22	-	41	-	3	1	4	-	3	40	89
Maine*	-	-	2	-	-	-	-	-	-	2	10
New Hampshire .....	2	-	-	-	-	1	-	-	1	3	13
Vermont .....	-	-	1	-	-	-	-	-	-	3	12
Massachusetts .....	4	-	10	-	1	-	2	-	-	23	31
Rhode Island .....	13	-	17	-	2	-	-	-	-	-	11
Connecticut .....	3	-	11	-	-	-	2	-	2	9	12
MIDDLE ATLANTIC .....	38	-	4	-	-	6	8	-	43	100	183
Upstate New York .....	2	-	3	-	-	4	-	-	7	33	34
New York City .....	11	-	-	-	-	-	-	-	7	25	39
New Jersey .....	15	-	NN	-	-	-	4	-	18	19	76
Pennsylvania .....	10	-	1	-	-	2	4	-	11	23	34
EAST NORTH CENTRAL .....	55	-	67	-	-	28	9	-	21	203	158
Ohio .....	10	-	9	-	-	16	4	-	4	41	42
Indiana .....	4	-	1	-	-	1	-	-	-	24	12
Illinois .....	13	-	-	-	-	3	1	-	10	78	42
Michigan .....	28	-	4	-	-	5	1	-	7	51	60
Wisconsin .....	-	-	53	-	-	3	3	-	-	9	2
EAST NORTH CENTRAL .....	6	-	5	-	7	3	1	1	5	35	36
Minnesota .....	2	-	-	-	-	-	-	1	2	3	7
Iowa .....	-	-	4	-	-	-	1	-	2	3	5
Missouri .....	2	-	-	-	-	1	-	-	1	10	10
North Dakota .....	-	-	1	-	-	-	-	-	-	-	3
South Dakota .....	-	-	-	-	7	-	-	-	-	-	2
Nebraska .....	-	-	-	-	-	-	-	-	-	1	1
Kansas .....	2	-	-	-	-	2	-	-	-	18	8
SOUTH ATLANTIC .....	27	-	74	-	-	4	7	-	32	147	131
Delaware .....	-	-	1	-	-	-	-	-	-	1	3
Maryland .....	5	-	2	-	-	1	1	-	5	11	16
District of Columbia .....	6	-	1	-	-	-	-	-	-	-	-
Virginia .....	7	-	-	-	-	-	1	-	3	11	9
West Virginia .....	-	-	58	-	-	1	-	-	-	4	6
North Carolina .....	-	-	NN	-	-	2	5	-	5	28	29
South Carolina .....	-	-	12	-	-	-	-	-	-	17	9
Georgia .....	-	-	-	-	-	-	-	-	-	4	22
Florida .....	9	-	-	-	-	-	-	-	19	71	37
EAST SOUTH CENTRAL .....	8	-	1	-	-	-	1	-	1	60	62
Kentucky .....	1	-	-	-	-	-	-	-	-	14	12
Tennessee .....	5	-	NN	-	-	-	1	-	1	41	39
Alabama .....	2	-	-	-	-	-	-	-	-	5	5
Mississippi .....	-	-	1	-	-	-	-	-	-	-	6
WEST SOUTH CENTRAL .....	5	2	4	-	11	2	1	-	1	26	157
Arkansas*	-	-	3	-	-	-	-	-	-	6	36
Louisiana .....	2	2	NN	-	-	-	-	-	1	20	11
Oklahoma*	3	-	1	-	-	2	1	-	-	-	19
Texas .....	---	---	---	---	11	---	-	---	---	---	91
MOUNTAIN .....	14	-	14	-	14	-	2	-	1	42	74
Montana .....	11	-	2	-	-	-	-	-	-	5	3
Idaho .....	3	-	-	-	-	-	-	-	-	-	9
Wyoming .....	-	-	-	-	-	-	-	-	-	-	2
Colorado .....	-	-	2	-	-	-	-	-	-	23	17
New Mexico .....	-	-	8	-	6	-	2	-	-	3	21
Arizona*	-	-	-	-	8	-	-	-	-	1	12
Utah .....	-	-	2	-	-	-	-	-	1	2	8
Nevada .....	-	-	-	-	-	-	-	-	-	8	2
PACIFIC .....	7	-	34	1	79	7	5	5	53	240	229
Washington .....	7	-	5	1	71	-	-	-	2	27	15
Oregon .....	-	-	-	-	3	-	-	1	2	19	42
California .....	-	-	-	-	3	7	5	4	49	154	152
Alaska .....	-	-	2	-	2	-	-	-	-	38	11
Hawaii .....	-	-	27	-	-	-	-	-	-	2	9
Guam .....	-	-	-	-	-	-	2	-	-	-	-
Puerto Rico .....	-	-	9	-	-	-	-	-	-	15	13
Virgin Islands .....	-	-	10	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: Ark. 2  
 Chickenpox: Me. 2  
 Encephalitis, primary: Ark. 2, Okla. delete 3

Hepatitis B: Ariz. 3  
 Hepatitis A: Me. 5, Ark. 6, Ariz. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING AUGUST 25, 1973 AND AUGUST 26, 1972 (34th WEEK) - Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	5	158	70	23,877	26,651	14	1,009	970	268	54,556	82	25,761
NEW ENGLAND .....	-	12	5	7,362	3,084	-	46	39	23	2,791	5	3,597
Maine*	-	-	-	64	243	-	1	3	1	318	-	68
New Hampshire .....	-	-	-	857	229	-	6	3	-	186	-	355
Vermont .....	-	2	-	118	125	-	3	-	3	244	-	44
Massachusetts .....	-	6	2	3,920	683	-	12	18	5	815	5	2,039
Rhode Island .....	-	-	-	603	519	-	3	10	3	328	-	212
Connecticut .....	-	4	3	1,800	1,285	-	21	5	11	900	-	879
MIDDLE ATLANTIC .....	2	24	17	2,419	975	3	136	119	38	7,136	10	4,163
Upstate New York .....	-	13	3	792	124	2	48	32	NN	NN	3	417
New York City .....	1	2	5	884	311	-	27	36	27	4,473	4	458
New Jersey .....	-	4	9	398	484	-	32	24	6	1,482	2	2,999
Pennsylvania .....	1	5	-	345	56	1	29	27	5	1,181	1	289
EAST NORTH CENTRAL .....	-	21	33	8,420	10,950	1	126	141	42	14,080	27	5,886
Ohio*	-	4	1	279	244	-	55	56	5	2,662	1	682
Indiana .....	-	3	1	620	1,232	-	4	11	5	1,168	1	929
Illinois .....	-	11	14	2,037	4,076	-	24	30	6	2,381	2	936
Michigan .....	-	3	9	4,345	1,973	1	38	38	3	3,886	5	1,815
Wisconsin .....	-	-	8	1,139	3,425	-	5	6	23	3,983	18	1,524
WEST NORTH CENTRAL .....	-	7	-	436	937	1	79	68	6	4,586	1	1,202
Minnesota .....	-	1	-	19	19	-	7	19	-	79	-	221
Iowa .....	-	1	-	277	652	1	19	2	1	2,792	-	187
Missouri .....	-	1	-	49	163	-	32	20	2	668	1	261
North Dakota .....	-	1	-	58	52	-	3	-	-	66	-	276
South Dakota .....	-	-	-	-	6	-	4	2	1	18	-	23
Nebraska .....	-	1	-	6	18	-	7	9	2	127	-	139
Kansas .....	-	2	-	27	27	-	7	16	-	836	-	95
SOUTH ATLANTIC .....	-	23	3	1,190	2,121	4	169	220	21	6,419	5	2,079
Delaware .....	-	-	-	8	48	-	-	1	-	264	-	13
Maryland .....	-	3	-	12	15	1	23	33	3	625	-	10
District of Columbia .....	-	1	-	5	2	-	4	9	2	104	-	3
Virginia*	-	5	-	414	60	1	31	49	-	680	-	620
West Virginia .....	-	-	2	195	270	-	2	7	5	2,218	1	284
North Carolina .....	-	6	-	4	33	-	36	27	NN	NN	-	201
South Carolina .....	-	1	-	58	214	1	12	20	2	352	-	84
Georgia .....	-	3	-	149	166	-	21	15	-	29	1	12
Florida .....	-	4	1	345	1,313	1	40	59	9	2,147	3	852
EAST SOUTH CENTRAL .....	-	6	1	595	1,035	-	91	77	52	4,458	10	1,290
Kentucky .....	-	1	1	367	521	-	32	25	23	1,307	-	389
Tennessee .....	-	-	-	165	191	-	37	28	20	2,052	2	513
Alabama .....	-	5	-	9	141	-	15	16	8	642	-	186
Mississippi .....	-	-	-	54	182	-	7	8	1	457	8	202
WEST SOUTH CENTRAL .....	-	9	1	646	1,447	2	158	122	5	3,613	-	1,431
Arkansas .....	-	-	-	69	13	-	13	9	1	352	-	112
Louisiana .....	-	2	-	84	82	1	34	35	-	77	-	99
Oklahoma .....	-	1	1	53	10	1	28	6	4	429	-	177
Texas .....	---	6	---	440	1,342	---	83	72	---	2,755	---	1,043
MOUNTAIN .....	-	9	2	590	1,803	-	31	19	11	2,424	4	2,364
Montana .....	-	1	-	16	15	-	6	3	4	229	-	502
Idaho .....	-	-	-	252	71	-	4	5	-	110	-	35
Wyoming .....	-	-	-	80	51	-	-	1	-	420	-	6
Colorado .....	-	2	2	105	520	-	11	4	5	433	-	1,541
New Mexico .....	-	2	-	118	119	-	3	2	2	958	3	191
Arizona .....	-	4	-	16	872	-	3	1	-	140	-	17
Utah .....	-	-	-	2	155	-	2	2	-	126	1	69
Nevada .....	-	-	-	1	-	-	2	1	-	8	-	3
PACIFIC .....	3	47	8	2,219	4,299	3	173	165	70	9,049	20	3,749
Washington .....	-	3	-	1,008	973	-	17	15	3	1,409	7	659
Oregon .....	1	3	-	454	130	-	12	13	10	1,675	1	781
California .....	2	38	8	673	3,090	3	138	128	43	5,024	12	2,274
Alaska .....	-	2	-	65	11	-	6	6	8	687	-	9
Hawaii .....	-	1	-	19	95	-	-	3	6	254	-	26
Guam .....	-	-	-	26	10	-	-	11	-	17	-	8
Puerto Rico .....	-	-	5	1,762	624	-	8	4	10	670	-	26
Virgin Islands .....	-	-	1	1	2	-	-	2	1	22	-	2

\*Delayed reports: Meningococcal infections: Ohio delete 1  
Mumps: Me. 7  
Rubella: Va. delete 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING AUGUST 25, 1973 AND AUGUST 26, 1972 (34th WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES . . . . .	58	509	20,612	107	15	460	23	488	17,228	381	62	2,426
NEW ENGLAND . . . . .	2	31	740	—	1	9	—	1	261	4	1	99
Maine . . . . .	—	—	59	—	—	—	—	—	33	—	—	55
New Hampshire *. . . . .	—	1	42	—	—	—	—	—	4	—	1	35
Vermont . . . . .	—	2	22	—	—	—	—	—	18	—	—	3
Massachusetts *. . . . .	—	13	389	—	1	9	—	1	—	—	—	5
Rhode Island . . . . .	1	5	57	—	—	—	—	—	33	—	—	—
Connecticut . . . . .	1	10	171	—	—	—	—	—	173	4	—	1
MIDDLE ATLANTIC . . . . .	7	110	4,016	—	1	43	1	28	2,698	63	1	33
Upstate New York . . . . .	1	16	714	—	—	6	—	13	387	1	—	14
New York City . . . . .	3	26	1,510	—	—	15	1	4	1,062	38	—	—
New Jersey . . . . .	2	38	706	—	1	13	—	5	365	17	—	—
Pennsylvania . . . . .	1	30	1,086	—	—	9	—	6	884	7	1	19
EAST NORTH CENTRAL . . . . .	10	86	3,133	3	—	25	2	19	2,056	25	13	239
Ohio *. . . . .	3	25	927	—	—	10	1	14	591	5	—	29
Indiana . . . . .	1	13	412	—	—	—	—	—	293	6	2	50
Illinois . . . . .	3	26	937	1	—	6	1	5	220	8	3	64
Michigan . . . . .	1	22	780	2	—	7	—	—	717	3	1	5
Wisconsin *. . . . .	2	—	77	—	—	2	—	—	235	3	7	91
WEST NORTH CENTRAL . . . . .	5	18	834	10	3	21	—	16	1,259	8	22	776
Minnesota . . . . .	—	—	103	—	—	4	—	—	284	3	9	275
Iowa . . . . .	—	—	89	—	—	—	—	7	353	1	4	156
Missouri . . . . .	4	10	385	10	3	12	—	7	365	3	4	74
North Dakota . . . . .	1	1	29	—	—	—	—	—	15	—	4	127
South Dakota . . . . .	—	2	60	—	—	1	—	—	38	—	—	77
Nebraska . . . . .	—	3	55	—	—	1	—	2	86	1	—	3
Kansas . . . . .	—	2	113	—	—	3	—	—	118	—	1	64
SOUTH ATLANTIC . . . . .	12	98	4,097	9	1	232	16	247	4,560	137	7	201
Delaware . . . . .	—	2	55	—	—	—	—	7	49	1	—	3
Maryland . . . . .	—	15	441	—	—	6	—	10	406	3	1	11
District of Columbia . . . . .	—	6	186	—	—	—	—	—	442	13	—	—
Virginia . . . . .	2	10	539	3	—	3	2	51	444	60	1	59
West Virginia . . . . .	—	11	195	—	—	2	—	3	41	1	1	19
North Carolina . . . . .	—	20	668	1	1	5	9	112	541	4	—	1
South Carolina . . . . .	1	1	342	—	—	4	2	28	407	35	1	5
Georgia . . . . .	2	12	678	3	—	1	2	35	1,134	20	3	69
Florida . . . . .	7	21	993	2	—	211	1	1	1,096	—	—	34
EAST SOUTH CENTRAL . . . . .	7	44	1,864	8	8	28	1	73	1,872	23	2	352
Kentucky . . . . .	1	12	439	1	—	3	—	—	157	4	1	190
Tennessee . . . . .	4	16	579	6	—	9	1	36	697	13	—	122
Alabama . . . . .	2	16	504	—	8	10	—	10	670	3	1	39
Mississippi . . . . .	—	—	342	1	—	6	—	27	348	3	—	1
WEST SOUTH CENTRAL . . . . .	8	15	2,072	73	—	20	2	88	1,180	10	2	438
Arkansas*. . . . .	—	2	249	51	—	3	—	15	614	—	—	91
Louisiana*. . . . .	3	8	338	—	—	6	—	—	339	9	—	34
Oklahoma . . . . .	3	5	181	17	—	2	2	66	227	1	2	136
Texas . . . . .	2	—	1,304	5	—	9	—	7	—	—	—	177
MOUNTAIN . . . . .	—	21	671	3	—	8	—	8	694	21	—	24
Montana . . . . .	—	2	33	—	—	—	—	1	55	—	—	—
Idaho . . . . .	—	—	26	—	—	—	—	2	37	—	—	—
Wyoming . . . . .	—	—	18	—	—	1	—	1	2	—	—	—
Colorado . . . . .	—	—	120	—	—	1	—	1	232	4	—	—
New Mexico . . . . .	—	6	146	1	—	2	—	3	130	7	—	4
Arizona*. . . . .	—	13	259	—	—	4	—	—	154	3	—	20
Utah . . . . .	—	—	27	2	—	—	—	—	34	—	—	—
Nevada . . . . .	—	—	42	—	—	—	—	—	50	7	—	—
PACIFIC . . . . .	7	86	3,185	1	1	74	1	8	2,648	90	14	264
Washington . . . . .	2	2	253	—	—	6	1	5	247	4	1	5
Oregon . . . . .	1	—	167	—	—	2	—	2	256	1	1	7
California . . . . .	4	72	2,505	1	1	64	—	1	2,001	77	12	244
Alaska . . . . .	—	—	67	—	—	1	—	—	82	7	—	8
Hawaii . . . . .	—	12	193	—	—	1	—	—	62	1	—	—
Guam . . . . .	—	—	28	—	—	—	—	—	—	—	—	—
Puerto Rico . . . . .	4	6	311	—	—	7	—	—	44	11	1	36
Virgin Islands . . . . .	—	—	1	—	—	—	—	—	12	—	—	—

\*Delayed reports: TB: Mass. 16, Ohio delete 2, Ariz. 8  
RMSF: Ark. 3  
Gonorrhea: N. H. 3, Wis. 65, La. delete 1, Ariz. 188

Syphilis: Ariz. 1  
Rabies: Ariz. 1

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING AUGUST 25, 1973

Week No.

34

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	616	356	24	32	SOUTH ATLANTIC	1,181	656	48	40
Boston, Mass.	188	97	8	12	Atlanta, Ga.	144	67	10	6
Bridgeport, Conn.	45	28	1	2	Baltimore, Md.	244	130	2	4
Cambridge, Mass.	19	11	3	1	Charlotte, N. C.	55	27	4	—
Fall River, Mass.	26	19	—	1	Jacksonville, Fla.	99	52	4	1
Hartford, Conn.	46	24	3	1	Miami, Fla.	106	73	5	1
Lowell, Mass.	29	16	—	2	Norfolk, Va.	49	21	2	—
Lynn, Mass.	14	11	—	1	Richmond, Va.	81	45	5	6
New Bedford, Mass.	23	16	—	2	Savannah, Ga.	25	12	—	1
New Haven, Conn.	58	34	2	1	St. Petersburg, Fla.	90	75	1	7
Providence, R. I.	46	26	1	6	Tampa, Fla.	77	38	6	7
Somerville, Mass.	4	4	—	—	Washington, D. C.	150	84	8	5
Springfield, Mass.	35	19	2	2	Wilmington, Del.	61	32	1	2
Waterbury, Conn.	22	13	2	—	EAST SOUTH CENTRAL	653	357	28	23
Worcester, Mass.	61	38	2	1	Birmingham, Ala.	93	50	—	1
MIDDLE ATLANTIC	3,031	1,764	105	125	Chattanooga, Tenn.	46	27	2	1
Albany, N. Y.	62	33	3	1	Knoxville, Tenn.	48	35	1	—
Allentown, Pa.	32	21	—	2	Louisville, Ky.	120	64	4	11
Buffalo, N. Y.	127	73	7	11	Memphis, Tenn.	150	83	9	1
Camden, N. J.	46	23	—	5	Mobile, Ala.	52	23	6	3
Elizabeth, N. J.	20	8	—	1	Montgomery, Ala.	41	16	1	1
Erie, Pa.	23	19	1	2	Nashville, Tenn.	103	59	5	5
Jersey City, N. J.	35	21	2	2	WEST SOUTH CENTRAL	1,273	692	73	46
Newark, N. J.	72	24	14	2	Austin, Tex.	36	18	2	1
New York City, N. Y.†	1,543	928	33	59	Baton Rouge, La.	74	49	2	6
Paterson, N. J.	38	18	5	—	Corpus Christi, Tex.	28	14	3	—
Philadelphia, Pa.	499	281	24	20	Dallas, Tex.	170	76	13	—
Pittsburgh, Pa.	175	87	7	10	El Paso, Tex.	52	23	6	3
Reading, Pa.	40	26	2	2	Fort Worth, Tex.	85	53	5	6
Rochester, N. Y.	101	69	2	3	Houston, Tex.	243	115	12	3
Schenectady, N. Y.	31	20	1	—	Little Rock, Ark.	66	46	2	8
Scranton, Pa.	32	22	1	—	New Orleans, La.	183	103	4	6
Syracuse, N. Y.	76	42	2	—	Oklahoma City, Okla. *	89	52	5	2
Trenton, N. J.	33	15	1	3	San Antonio, Tex.	149	88	11	2
Utica, N. Y.	15	13	—	1	Shreveport, La.	46	23	3	4
Yonkers, N. Y.	31	21	—	1	Tulsa, Okla.	52	32	5	5
EAST NORTH CENTRAL	2,331	1,310	97	55	MOUNTAIN	536	320	16	19
Akron, Ohio	65	35	4	—	Albuquerque, N. Mex.	47	28	1	5
Canton, Ohio	39	23	1	—	Colorado Springs, Colo.	34	23	1	1
Chicago, Ill.	598	303	27	9	Denver, Colo.	125	77	1	8
Cincinnati, Ohio	150	96	9	1	Las Vegas, Nev.	34	15	1	—
Cleveland, Ohio	205	106	8	5	Ogden, Utah	21	14	—	2
Columbus, Ohio	89	51	7	—	Phoenix, Ariz.	121	67	4	—
Dayton, Ohio	89	48	5	4	Pueblo, Colo.	28	19	—	2
Detroit, Mich.	309	164	5	4	Salt Lake City, Utah	54	36	3	1
Evansville, Ind.	32	20	3	4	Tucson, Ariz.	72	41	5	—
Fort Wayne, Ind.	37	22	1	3	PACIFIC	1,667	1,038	55	32
Gary, Ind.	46	20	4	4	Berkeley, Calif.	20	11	—	—
Grand Rapids, Mich.	58	38	3	3	Fresno, Calif.	66	37	5	1
Indianapolis, Ind.	158	86	7	3	Glendale, Calif.	26	20	—	—
Madison, Wis.	16	10	2	3	Honolulu, Hawaii	51	30	3	2
Milwaukee, Wis.	134	103	2	2	Long Beach, Calif.	87	56	3	3
Peoria, Ill.	46	23	2	—	Los Angeles, Calif.	558	357	15	7
Rockford, Ill.	46	26	1	4	Oakland, Calif.	80	56	3	—
South Bend, Ind.	45	27	1	2	Pasadena, Calif.	38	28	1	—
Toledo, Ohio	106	73	1	3	Portland, Oreg.	134	91	4	5
Youngstown, Ohio	63	36	4	1	Sacramento, Calif.	52	32	—	—
WEST NORTH CENTRAL	720	448	30	19	San Diego, Calif.	112	63	7	1
Des Moines, Iowa	49	35	—	—	San Francisco, Calif.	172	99	7	5
Duluth, Minn.	23	21	—	3	San Jose, Calif.	52	34	—	1
Kansas City, Kans.	29	10	1	1	Seattle, Wash.	137	76	4	2
Kansas City, Mo.	120	63	5	2	Spokane, Wash.	41	23	2	5
Lincoln, Nebr.	38	28	1	—	Tacoma, Wash.	41	25	1	—
Minneapolis, Minn.	68	48	5	—	Total	12,008	6,941	476	391
Omaha, Nebr.	85	55	4	1	Expected Number	12,084	6,824	548	392
St. Louis, Mo.	201	123	10	4	Cumulative Total (includes reported corrections for previous weeks)	441,581	259,823	16,434	18,104
St. Paul, Minn.	62	41	2	3					
Wichita, Kans.	45	24	2	5					

†Delayed report for week ending August 18, 1973

\*Estimate based on average percent of divisional total

TRICHINOSIS – Continued

eaten pork chops which had been cooked for a short time and were still partially frozen. Samples of pork chops purchased at the same time as those eaten by the patients were obtained from the family's freezer and were found to be positive for *T. spiralis* larvae. Further investigation of the retail store from which the pork was bought and the meat packing plant could not determine the exact source of the

pork. It may have originated from any of several lots of swine purchased between February 12 and 15.

(Reported by Taylor Kramer, Public Health Representative, George Baer, D.V.M., Veterinary Epidemiologist, Jack Russell, D.V.M., State Public Health Veterinarian, and John H. Ackerman, M.D., Chief, Division of Communicable Diseases, Ohio State Department of Health.)

SURVEILLANCE SUMMARY  
ASEPTIC MENINGITIS – United States, 1971

In 1971, a total of 4,073 cases of aseptic meningitis were reported to CDC on annual summary forms from 44 of 52 reporting areas in the United States; 30 were fatal.\* In 1970, there were 5,272 reported cases and 44 deaths. A diagnostic etiology was given for 739 cases in 1971; 611 were associated with enteroviruses, 90 with mumps, 12 with herpes simplex, 2 with western equine encephalomyelitis, 2 with St. Louis encephalitis, and 16 with other known agents. Virologic data on 6 cases indicated more than 1 possible etiology. No etiology was shown for the remaining 3,334 cases. The distribution of cases by etiologic category and month of onset is shown in Figure 1.

Of 3,022 cases for which both age and sex were reported, 1,529 (50.6%) were in males under 20 years of age. The seasonal pattern of cases showed a late summer peak. Attack rates by state are shown in Figure 2. The dissimilar attack rates from state to state for a given year reflect variations in incidence, reporting practice, and emphasis in epidemiologic and laboratory investigation. Therefore, these data provide

\*The total number of reported cases of aseptic meningitis for 1971 based on weekly telegraphic reports was 5,176.

Figure 1  
CASES OF ASEPTIC MENINGITIS\* IN 44 REPORTING AREAS, BY MONTH OF ONSET AND ETIOLOGIC GROUP – 1971

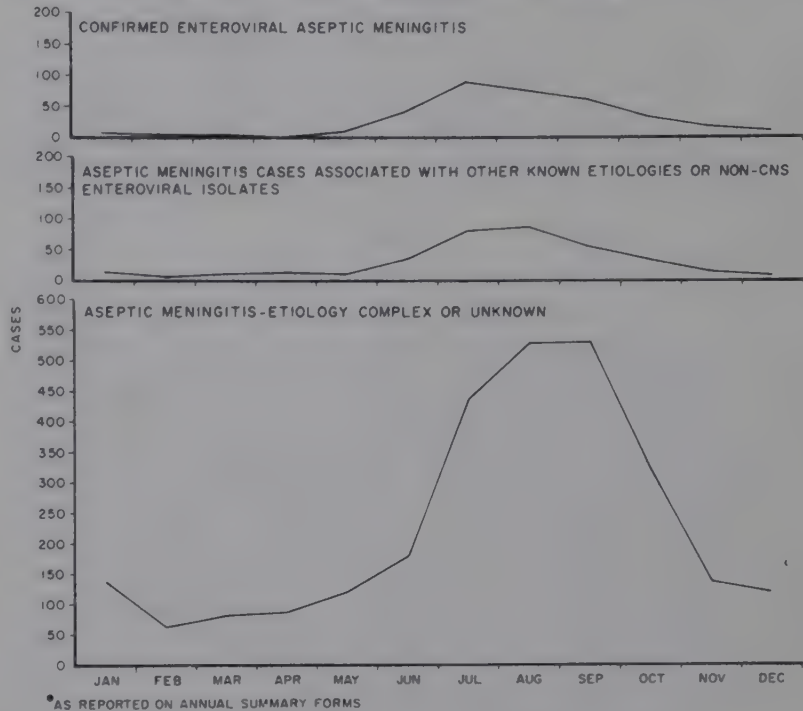
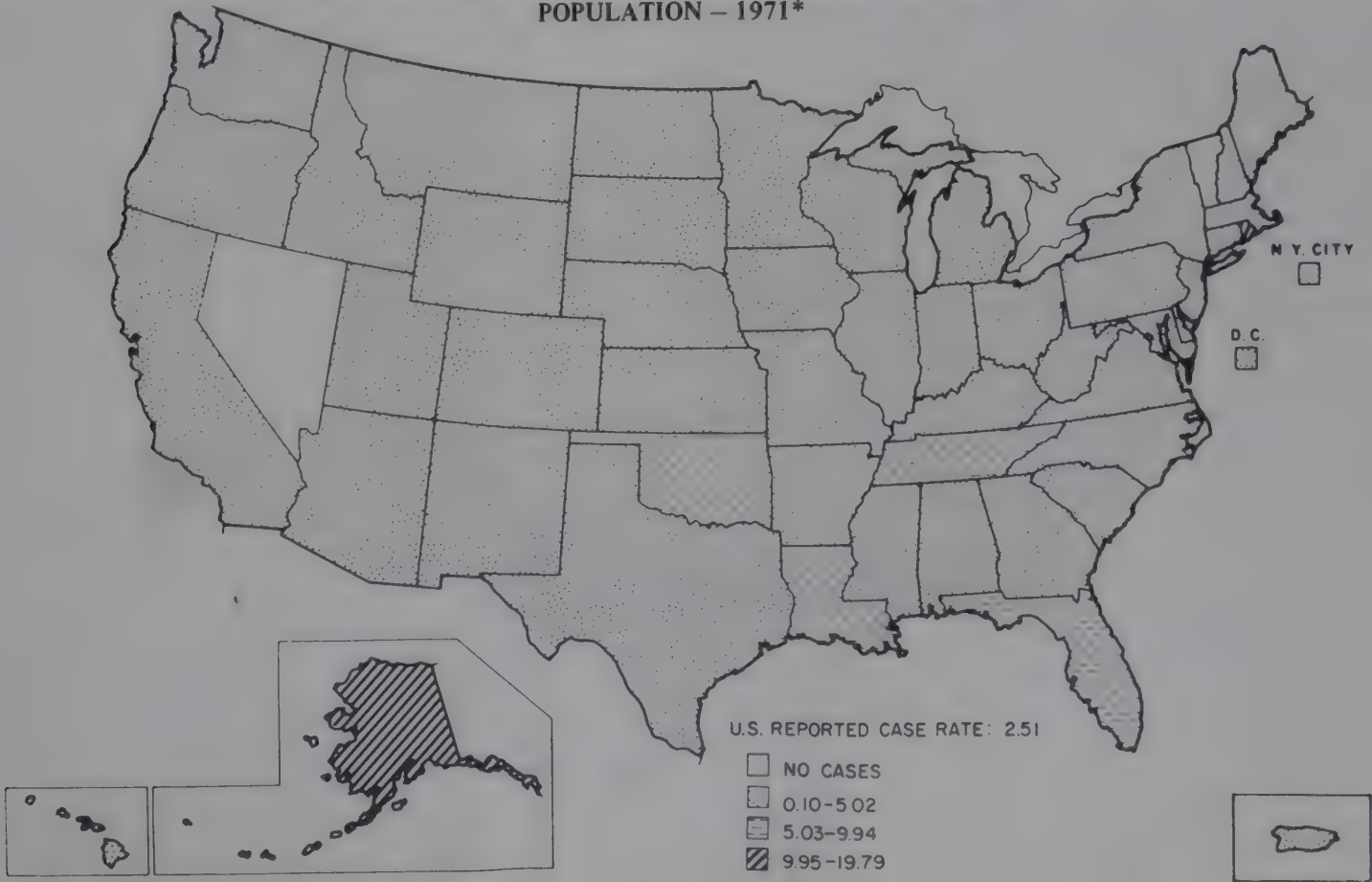


Figure 2  
REPORTED CASES OF ASEPTIC MENINGITIS PER 100,000 POPULATION – 1971\*



**ASEPTIC MENINGITIS – Continued**

only a general overview of the nationwide distribution and incidence of aseptic meningitis.

*(Reported by the Arbovirology Section, and the Developmental Virology Section, Virology Branch, Bureau of Laboratories, and the Neurotropic Diseases Unit, Viral Diseases Branch, Bureau of Epidemiology, CDC.)*

A copy of the original report from which these data were derived is available on request from

Center for Disease Control

Attn: Neurotropic Diseases Unit, Viral Diseases Branch  
Bureau of Epidemiology

Atlanta, Georgia 30333

### EPIDEMIOLOGIC NOTES AND REPORTS INFLUENZA B – United Kingdom, 1973

In January 1973, a small but widespread epidemic of influenza B developed in the United Kingdom; a total of 206 confirmed infections have been reported so far this year. Initial cases were recognized in the southwest of England, then spread to the Midlands and North areas. As in the past, children were affected predominantly. Extensive outbreaks among pupils at boarding schools were seen, 1 of the earliest occurring in January in an Army camp in North Wales where 300 persons, aged 15-17 years, were ill.

The number of cases reported each week reached a peak in late April and early May, but a small number of cases are still being reported. Seventy percent of reported infections are in children under 15 years of age. This is slightly higher than the 50% figure seen in the past.

Influenza B in the United Kingdom this year differed from usual in that 3 different antigenic variants of the virus have been detected. Early in the year, most isolates were similar to the influenza B viruses seen in the past 10 years. In the middle of March, however, strains of influenza B were isolated which showed a sharp difference from previous strains

and a partial similarity to B/Hong Kong/5/72 strains isolated during the winter epidemic in Hong Kong last year. These strains have been termed "intermediate". During the following 2 months more intermediate isolates were found; however, in late May, strains showing even further antigenic drift indistinguishable from B/Hong Kong/5/72 were isolated. In June, the "intermediate" and older strains seemed to disappear. Severe influenza epidemics in the United Kingdom are usually attributed to the influenza A virus, but a major B epidemic is sometimes encountered. The last epidemic caused mainly by the influenza B virus in the United Kingdom was in 1962. Studies in progress suggest a low prevalence of antibody to the new influenza B virus in the population, and the possibility clearly exists that influenza B/Hong Kong/5/72 virus may cause problems in the coming winter.

*(From notes based on reports to the Public Health Laboratory Service from Public Health and Hospital Laboratories in the United Kingdom and Republic of Ireland, published in the British Medical Journal, August 4, 1973.)*

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to: Center for Disease Control  
Attn: Editor  
Morbidity and Mortality Weekly Report  
Atlanta, Georgia 30333

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PUBLIC HEALTH SERVICE  
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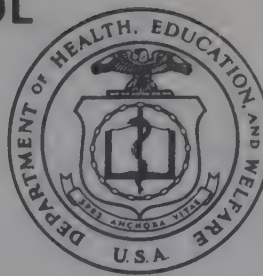
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# Morbidity and Mortality



Vol. 22, No. 35

WEEKLY  
REPORT

For  
Week Ending  
September 1, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE  
DATE OF RELEASE: SEPTEMBER 7, 1973 — ATLANTA, GEORGIA 30333

## EPIDEMIOLOGIC NOTES AND REPORTS CHOLERA — Texas

On August 25, 1973, a 51-year-old man from the Gulf Coast town of Port Lavaca, Texas, had precipitous onset of profuse watery diarrhea which gradually changed over several hours from brown to clear in color. The stool was neither bloody nor malodorous. The diarrhea was accompanied by nausea, vomiting, mild abdominal pain, and incapacitating cramps which began in the calves and progressed to both thighs. Four hours after the onset of symptoms the man was admitted to a local hospital in shock. His past medical history included chronic low back pain, infrequent angina pectoris, and a subtotal gastrectomy in 1972 for long-standing peptic ulcer disease.

On admission physical examination revealed an apical pulse of 150, respirations of 30, and no obtainable blood pressure. He was afebrile, conscious, and oriented. His abdo-

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men was soft and non-tender; the remainder of the physical examination was unremarkable. Admission laboratory values included hemoglobin 18.1 gm/100 ml, white blood cell count 13,400/mm<sup>3</sup>, sodium 136 mEq/l, potassium 3.1 mEq/l, carbon dioxide combining power 18 mEq/l, and BUN 40 mg/100 ml.

Initial treatment included intravenous lactated Ringer's solution and intravenous gentamicin. On the afternoon of

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	35th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 35 WEEKS		
	September 1, 1973	September 2, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	181	147	196	2,655	2,073	2,164
Brucellosis	2	1	3	130	121	137
Chickenpox	213	314	— — —	144,713	113,669	— — —
Diphtheria	4	8	3	118	71	108
Encephalitis, primary:						
Arthropod-borne and unspecified	52	37	41	916	652	751
Encephalitis, post-infectious	4	10	7	208	210	275
Hepatitis, serum (Hepatitis B)	168	186	116	5,375	6,188	4,836
Hepatitis, infectious (Hepatitis A)	945	973	973	33,809	36,993	36,994
Malaria	2	9	57	160	673	1,881
Measles (rubeola)	73	99	135	23,951	26,750	26,750
Meningococcal infections, total	13	16	23	1,022	986	1,822
Civilian	13	16	21	998	948	1,638
Military	—	—	1	24	38	184
Mumps	247	287	428	54,810	56,278	74,997
Rubella (German measles)	63	296	219	25,845	20,685	43,349
Tetanus	2	3	2	60	77	77
Tuberculosis, new active	574	702	— — —	21,182	22,678	— — —
Tularemia	6	5	5	113	96	97
Typhoid fever	7	10	8	467	234	208
Typhus, tick-borne (Rky. Mt. spotted fever)	21	24	15	510	401	321
Venereal Diseases:						
Gonorrhea	16,829	16,261	— — —	543,932	490,263	— — —
Syphilis, primary and secondary	463	448	— — —	17,416	16,468	— — —
Rabies in animals	72	65	65	2,506	2,935	2,461

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	3
Botulism:	13	Paralytic:	3
Congenital rubella syndrome:	19	Psittacosis: Calif.-1	16
Leprosy: Calif.-1	86	Rabies in man:	—
Leptospirosis:	22	Trichinosis: Conn.-1, Ill.-1	66
Plague: *	2	Typhus, murine:	25

\*Delayed reports: Plague: N. Mex.-1

**CHOLERA — Continued**

admission the patient fainted while sitting in bed for a portable chest X-ray. He was examined at that time by a physician who recognized the patient's illness as being compatible with cholera. The patient was given additional intravenous fluids with supplemental potassium and bicarbonate, and tetracycline was prescribed. The patient's condition improved dramatically within 24 hours after admission, and he was discharged in good health 1 week later.

*Vibrio cholerae* was isolated by the Texas State Health Laboratory from a stool culture obtained on admission. The isolate was subsequently identified as *V. cholerae*, biotype El Tor, serotype Inaba, at the University of Texas and CDC. The case was reported to the World Health Organization.

Epidemiologic investigation revealed that the patient had not left the country since serving in the military in the 1950s and had not been away from home for several months. He had no known contact with persons with a history of recent foreign travel. An extensive search has revealed no additional cases of suspected cholera in the county. Further epidemiologic and laboratory investigations to determine the source of the patient's infection are in progress.

(Reported by Charles E. Sweet, Dr.P.H., Acting Director, Laboratory Services, M. S. Dickerson, M.D., State Epidemi-

ologist, J. E. Peavy, M.D., State Health Officer, Texas State Department of Health; Charles E. Lankford, Ph.D., Professor, Department of Microbiology, University of Texas, Austin; the Enterobacteriology Section, Bacteriology Branch, Bureau of Laboratories, the Bacterial Diseases Branch, Bureau of Epidemiology, CDC; and 3 EIS Officers.)

**Editorial Note**

This is the first case of confirmed cholera, with the exception of laboratory-acquired illness, reported in the United States since 1911. The patient's subtotal gastrectomy and presumed secondary achlorhydria probably rendered him unusually susceptible to infection with this acid-sensitive organism. The absence of secondary cases reflects the minimal potential for spread of cholera in areas with safe food and water supplies, such as those commonly encountered in the United States.

This case of *V. cholerae*, serotype Inaba, infection is unrelated to the current extension of the 12-year-old pandemic of El Tor cholera to Italy caused by the organism of the Ogawa serotype.

Because more than 10 days have passed since hospitalization of this single case, the area where he resides is not a cholera-infected area under the provisions of international health regulations.

**HEPATITIS-B IN AN ONCOLOGY UNIT — Maryland**

In March and April 1973, 6 (6.5%) of 92 staff members on an oncology unit became ill with clinical hepatitis: 2 medical students, a physician's assistant, a head nurse, a porter, and an animal caretaker in the laboratory area (Figure 1); all were positive for the hepatitis-B antigen (HBAg). There was no increase in hepatitis-B among the patients. Attack rates were higher for those staff members who worked in the patient care area of the unit (10.4%) than for those who worked in the laboratory area (3.6%).

Because of the temporal and spatial clustering of cases, a common source of infection in the unit was suspected. None of the ill individuals gave a history of intravenous drug abuse or transfusion. Only 1 had a history of accidental needle puncture in the 6 months preceding the onset of illness. There was no overt case of acute hepatitis-B to whom all of the ill staff members had been exposed; however, 9 of the patients on the unit were known carriers of HBAg, and 5 of the 6 ill staff members had had extensive contact with 1 of these 9 patients.

This patient, an 18-year-old man who had acute lymphoblastic leukemia, was first noted to convert from hepatitis-B antibody (HBAb)-positive to HBAg-positive on

July 11, 1972, following an intensive course of chemotherapy. He developed unusually high titers of HBAg (1:256,000 by passive hemagglutination inhibition). On August 20 and September 12, 1972, 2 nurses who cared for this patient became ill with hepatitis-B. The patient was discharged and spent most of the fall at home; he was readmitted to the unit on November 26, 1972. On January 1, 1973, the patient's mother became ill with hepatitis-B. Her son died on February 23. The outbreak on the unit followed in March and April.

The sixth case, the animal caretaker, denied contact with the suspect patient. Despite intensive investigation, the source of this staff member's illness could not be defined. No subsequent cases have been reported since the time of the investigation.

Recommendations included: 1) expansion of the present surveillance system of staff members to include bimonthly testing for SGOT, HBAg, and HBAb; 2) the suggestion that HBAb-positive staff members care for antigen-positive patients since antibody positivity implies previous exposure and immunity to hepatitis-B; 3) a reemphasis of blood and needle precautions, especially during the care of the HBAg-positive patients on chemotherapy.

(Reported by Jack R. Wands, M.D., Chief Resident, Charles C. J. Carpenter, M.D., Physician-in-Chief, Baltimore City Hospitals; Thomas T. Davis, M.D., Fellow, Albert H. Owens, Jr., Director, Oncology Research Unit, Johns Hopkins Medical Center-Baltimore City Hospitals; John D. Stafford, M.D., State Epidemiologist, Maryland State Department of Health; and 2 EIS Officers.)

**Editorial Note**

Three points of this outbreak are noteworthy. First, only 2 of the 9 ill individuals (including the 2 nurses in 1972 and

(Continued on page 299)

Figure 1  
HEPATITIS-B CASES IN ONCOLOGY UNIT STAFF  
BY MONTH OF ONSET  
BALTIMORE CITY HOSPITALS — 1970-1973

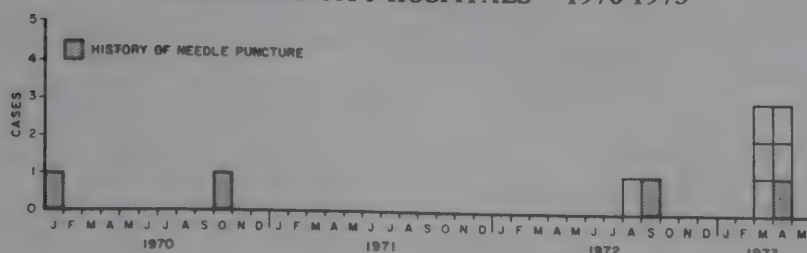


TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING SEPTEMBER 1, 1973 AND SEPTEMBER 2, 1972 (35th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES .....	181	2	213	4	118	52	37	4	168	945	973
NEW ENGLAND .....	15	-	30	-	3	4	2	-	6	81	84
Maine*	-	-	-	-	-	-	-	-	-	4	12
New Hampshire *	1	-	-	-	-	1	-	-	-	5	10
Vermont .....	-	-	-	-	-	-	-	-	-	4	3
Massachusetts .....	8	-	14	-	1	2	2	-	4	36	34
Rhode Island .....	6	-	6	-	2	-	-	-	-	15	3
Connecticut .....	-	-	10	-	-	1	-	-	2	17	22
MIDDLE ATLANTIC .....	22	-	11	-	-	2	1	1	34	105	196
Upstate New York .....	9	-	1	-	-	1	-	-	11	28	22
New York City .....	1	-	10	-	-	-	-	-	7	13	57
New Jersey*	8	-	NN	-	-	-	-	-	4	19	72
Pennsylvania .....	4	-	-	-	-	1	1	1	12	45	45
EAST NORTH CENTRAL .....	61	-	81	-	-	22	11	-	26	192	104
Ohio .....	28	-	7	-	-	13	3	-	9	36	8
Indiana*	-	-	8	-	-	-	-	-	-	9	18
Illinois .....	1	-	-	-	-	1	1	-	2	49	34
Michigan .....	31	-	11	-	-	8	7	-	14	94	42
Wisconsin .....	1	-	55	-	-	-	-	-	1	4	2
WEST NORTH CENTRAL .....	3	1	1	-	7	4	4	-	3	23	23
Minnesota .....	-	-	-	-	-	-	1	-	-	-	-
Iowa .....	-	-	-	-	-	-	1	-	1	-	5
Missouri .....	3	1	-	-	-	4	2	-	1	7	7
North Dakota *	-	-	1	-	-	-	-	-	1	-	1
South Dakota .....	-	-	-	-	7	-	-	-	-	5	1
Nebraska .....	-	-	-	-	-	-	-	-	-	1	1
Kansas .....	-	-	-	-	-	-	-	-	-	10	8
SOUTH ATLANTIC .....	13	1	25	-	-	7	2	-	9	150	174
Delaware .....	-	-	1	-	-	-	-	-	-	4	1
Maryland .....	-	-	2	-	-	-	1	-	1	12	25
District of Columbia .....	-	-	-	-	-	-	-	-	-	1	2
Virginia .....	1	-	1	-	-	-	-	-	-	4	26
West Virginia .....	2	-	18	-	-	2	-	-	-	4	6
North Carolina .....	4	-	NN	-	-	2	-	-	6	37	29
South Carolina .....	-	-	-	-	-	-	-	-	-	4	11
Georgia .....	-	1	3	-	-	-	-	-	-	27	11
Florida .....	6	-	-	-	-	3	1	-	2	57	63
EAST SOUTH CENTRAL .....	12	-	6	-	-	4	6	-	7	76	42
Kentucky .....	-	-	6	-	-	-	5	-	2	26	-
Tennessee .....	5	-	NN	-	-	4	-	-	2	43	31
Alabama .....	6	-	-	-	-	-	-	-	-	-	3
Mississippi .....	1	-	-	-	-	-	1	-	3	7	8
WEST SOUTH CENTRAL .....	19	-	36	3	14	5	2	1	10	124	123
Arkansas*	-	-	-	-	-	-	-	-	-	2	14
Louisiana .....	2	-	NN	-	-	-	-	-	2	11	31
Oklahoma .....	10	-	4	-	-	3	-	-	3	17	10
Texas .....	7	-	32	3	14	2	2	1	5	94	88
MOUNTAIN .....	1	-	9	-	14	-	-	-	3	24	23
Montana .....	-	-	3	-	-	-	-	-	-	3	1
Idaho .....	-	-	-	-	-	-	-	-	-	4	5
Wyoming *	-	-	-	-	-	-	-	-	-	1	-
Colorado .....	-	-	6	-	-	-	-	-	-	8	6
New Mexico .....	-	-	-	-	6	-	-	-	1	4	-
Arizona *	-	-	-	-	8	-	-	-	-	-	3
Utah .....	1	-	-	-	-	-	-	-	2	4	8
Nevada .....	-	-	-	-	-	-	-	-	-	-	-
PACIFIC .....	35	-	14	1	80	4	9	2	70	170	204
Washington .....	10	-	12	1	72	-	-	-	-	17	19
Oregon .....	2	-	1	-	3	-	-	-	1	24	26
California *	23	-	-	-	3	4	9	2	66	125	148
Alaska .....	-	-	1	-	2	-	-	-	3	4	-
Hawaii .....	---	---	---	---	-	---	-	---	---	---	11
Guam*	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	-	7	-	-	-	-	-	-	18	7
Virgin Islands .....	-	-	-	-	-	-	-	-	-	1	-

\*Delayed reports: Aseptic meningitis: N.H. 3, Calif. 35, Guam 1  
 Chickenpox: Me. 1, Guam 4  
 Encephalitis, primary: N. Dak. 2

Hepatitis B: N.J. delete 1, Ariz. 1, Guam 2  
 Hepatitis A: Me. 3, N.J. delete 1, Ind. delete 1, Ark. 4,  
 Wyo. 4, Ariz. 15, Guam 7

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING SEPTEMBER 1, 1973 AND SEPTEMBER 2, 1972 (35th WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	2	160	73	23,951	26,750	13	1,022	986	247	54,810	63	25,844
NEW ENGLAND .....	—	12	6	7,368	3,100	—	46	41	21	2,819	7	3,624
Maine *	—	—	—	64	244	—	1	3	—	324	—	68
New Hampshire*	—	—	—	857	229	—	6	3	1	188	—	375
Vermont .....	—	2	—	118	125	—	3	—	—	244	2	46
Massachusetts .....	—	6	5	3,925	689	—	12	19	9	824	1	2,040
Rhode Island .....	—	—	—	603	523	—	3	10	4	332	—	212
Connecticut .....	—	4	1	1,801	1,290	—	21	6	7	907	4	883
MIDDLE ATLANTIC .....	1	25	10	2,429	986	4	140	120	36	7,172	9	4,172
Upstate New York .....	—	13	3	795	125	—	48	32	NN	NN	—	417
New York City .....	—	2	4	888	319	2	29	37	23	4,496	4	462
New Jersey .....	—	4	3	401	484	1	33	24	7	1,489	5	3,004
Pennsylvania .....	1	6	—	345	58	1	30	27	6	1,187	—	289
EAST NORTH CENTRAL .....	—	21	30	8,450	10,972	1	127	144	27	14,107	16	5,902
Ohio .....	—	4	1	280	244	—	55	57	3	2,665	2	684
Indiana .....	—	3	9	629	1,236	—	4	11	9	1,177	4	933
Illinois .....	—	11	7	2,044	4,082	—	24	31	2	2,383	—	936
Michigan .....	—	3	8	4,353	1,976	1	39	39	7	3,893	8	1,823
Wisconsin .....	—	—	5	1,144	3,434	—	5	6	6	3,989	2	1,526
WEST NORTH CENTRAL .....	—	7	3	439	938	—	79	70	5	4,591	3	1,205
Minnesota .....	—	1	—	19	20	—	7	21	1	80	—	221
Iowa .....	—	1	—	277	652	—	19	2	—	2,792	—	187
Missouri .....	—	1	3	52	163	—	32	20	3	671	2	263
North Dakota .....	—	1	—	58	52	—	3	—	—	66	—	276
South Dakota .....	—	—	—	—	6	—	4	2	—	18	—	23
Nebraska .....	—	1	—	6	18	—	7	9	1	128	1	140
Kansas .....	—	2	—	27	27	—	7	16	—	836	—	95
SOUTH ATLANTIC .....	1	24	6	1,196	2,135	1	170	222	41	6,460	5	2,084
Delaware .....	—	—	—	8	49	—	—	1	—	264	—	13
Maryland .....	—	3	—	12	15	—	23	34	2	627	—	10
District of Columbia .....	—	1	—	5	2	—	4	9	1	105	—	3
Virginia .....	—	5	—	414	60	—	31	49	7	687	—	620
West Virginia .....	—	—	4	199	270	—	2	7	13	2,231	3	287
North Carolina .....	1	7	—	4	33	1	37	27	NN	NN	—	201
South Carolina .....	—	1	—	58	214	—	12	20	—	352	—	84
Georgia .....	—	3	2	151	166	—	21	15	2	31	—	12
Florida .....	—	4	—	345	1,326	—	40	60	16	2,163	2	854
EAST SOUTH CENTRAL .....	—	6	3	598	1,039	—	91	79	34	4,492	8	1,298
Kentucky .....	—	1	—	367	521	—	32	25	6	1,313	1	390
Tennessee .....	—	—	—	165	191	—	37	28	22	2,074	6	519
Alabama .....	—	5	—	9	145	—	15	16	6	648	—	186
Mississippi .....	—	—	3	57	182	—	7	10	—	457	1	203
WEST SOUTH CENTRAL .....	—	9	7	653	1,462	4	162	123	28	3,641	4	1,435
Arkansas .....	—	—	—	69	13	—	13	9	1	353	—	112
Louisiana .....	—	2	—	84	84	2	36	36	—	77	—	99
Oklahoma .....	—	1	—	53	10	1	29	6	1	430	—	177
Texas .....	—	6	7	447	1,355	1	84	72	26	2,781	4	1,047
MOUNTAIN .....	—	9	2	593	1,808	—	31	20	10	2,434	—	2,365
Montana .....	—	1	—	16	15	—	6	4	3	232	—	502
Idaho .....	—	—	—	252	74	—	4	5	—	110	—	35
Wyoming .....	—	—	—	80	51	—	—	1	—	420	—	6
Colorado .....	—	2	—	105	520	—	11	4	4	437	—	1,541
New Mexico .....	—	2	2	120	119	—	3	2	3	961	—	191
Arizona *	—	4	—	17	874	—	3	1	—	140	—	18
Utah .....	—	—	—	2	155	—	2	2	—	126	—	69
Nevada .....	—	—	—	1	—	—	2	1	—	8	—	3
PACIFIC .....	—	47	6	2,225	4,310	3	176	167	45	9,094	11	3,760
Washington .....	—	3	2	1,010	977	1	18	15	—	1,409	1	660
Oregon .....	—	3	—	454	130	—	12	13	11	1,686	2	783
California .....	—	38	4	677	3,095	2	140	129	30	5,054	8	2,282
Alaska .....	—	2	—	65	12	—	6	7	4	691	—	9
Hawaii .....	---	1	---	19	96	---	—	3	---	254	---	26
Guam *	—	—	—	48	10	—	—	11	—	18	—	12
Puerto Rico .....	—	—	19	1,781	624	—	8	4	13	683	—	26
Virgin Islands .....	—	—	—	1	2	—	—	2	—	22	—	2

\*Delayed reports: Measles: Ariz. 1, Guam 22  
Mumps: Me. 6, N.H. 1, Guam 1  
Rubella: N.H. 20, Ariz. 1, Guam 4

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING SEPTEMBER 1, 1973 AND SEPTEMBER 2, 1972 (35th WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES .....	60	574	21,182	113	7	467	21	510	16,829	463	72	2,506
NEW ENGLAND .....	2	28	768	—	—	9	—	1	318	2	—	99
Maine .....	—	2	61	—	—	—	—	—	23	1	—	55
New Hampshire .....	—	—	42	—	—	—	—	—	15	—	—	35
Vermont .....	—	—	22	—	—	—	—	—	13	—	—	3
Massachusetts .....	—	21	410	—	—	9	—	1	—	—	—	5
Rhode Island .....	1	3	60	—	—	—	—	—	28	—	—	—
Connecticut .....	1	2	173	—	—	—	—	—	239	1	—	1
MIDDLE ATLANTIC .....	7	120	4,136	—	—	43	2	30	2,210	78	—	33
Upstate New York .....	1	23	737	—	—	6	—	13	450	13	—	14
New York City .....	3	36	1,546	—	—	15	—	4	891	43	—	—
New Jersey .....	2	23	729	—	—	13	—	5	334	18	—	—
Pennsylvania .....	1	38	1,124	—	—	9	2	8	535	4	—	19
EAST NORTH CENTRAL .....	10	85	3,218	3	2	27	—	19	1,870	22	6	245
Ohio .....	3	22	949	—	1	11	—	14	504	5	—	29
Indiana .....	1	11	423	—	—	—	—	—	171	3	1	51
Illinois .....	3	23	960	1	—	6	—	5	353	6	—	64
Michigan .....	1	29	809	2	1	8	—	—	650	7	—	5
Wisconsin .....	2	—	77	—	—	2	—	—	192	1	5	96
WEST NORTH CENTRAL .....	5	25	859	12	—	21	2	18	968	5	20	796
Minnesota .....	—	1	104	—	—	4	—	—	232	1	7	282
Iowa .....	—	—	89	—	—	—	—	7	32	—	5	161
Missouri .....	4	11	396	11	—	12	—	7	330	1	4	78
North Dakota .....	1	1	30	—	—	—	—	—	4	—	2	129
South Dakota .....	—	3	63	—	—	1	—	—	21	—	—	77
Nebraska .....	—	4	59	—	—	1	—	2	229	3	—	3
Kansas .....	—	5	118	1	—	3	2	2	120	—	2	66
SOUTH ATLANTIC .....	12	118	4,213	9	—	232	11	259	4,741	208	13	214
Delaware .....	—	6	61	—	—	—	—	7	75	1	—	3
Maryland .....	—	10	451	—	—	6	2	12	345	8	2	13
District of Columbia .....	—	8	194	—	—	—	—	—	330	15	—	—
Virginia .....	2	8	547	3	—	3	2	53	549	71	4	63
West Virginia .....	—	3	198	—	—	2	1	4	82	—	1	20
North Carolina* .....	—	29	695	1	—	5	5	117	1,066	17	—	1
South Carolina* .....	1	4	346	—	—	4	—	29	310	22	—	5
Georgia .....	2	17	695	3	—	1	1	36	804	17	3	72
Florida* .....	7	33	1,026	2	—	211	—	1	1,180	57	3	37
EAST SOUTH CENTRAL .....	7	37	1,899	10	1	29	5	78	1,305	28	6	358
Kentucky* .....	1	10	447	1	1	4	—	—	205	6	5	195
Tennessee .....	4	3	582	7	—	9	3	39	538	11	1	123
Alabama .....	2	8	512	—	—	10	2	12	281	4	—	39
Mississippi .....	—	16	358	2	—	6	—	27	281	7	—	1
WEST SOUTH CENTRAL .....	10	68	2,140	75	1	21	1	89	1,971	34	15	452
Arkansas .....	—	12	261	53	—	3	—	15	54	—	8	99
Louisiana* .....	3	3	341	—	—	6	—	—	551	10	3	36
Oklahoma .....	4	2	183	17	—	2	1	67	311	4	1	137
Texas .....	3	51	1,355	5	1	10	—	7	1,055	20	3	180
MOUNTAIN .....	—	23	694	3	—	8	—	8	503	26	1	34
Montana* .....	—	—	33	—	—	—	—	1	39	1	—	9
Idaho .....	—	—	26	—	—	—	—	2	1	2	—	—
Wyoming* .....	—	1	19	—	—	1	—	1	11	—	—	—
Colorado .....	—	—	120	—	—	1	—	1	110	7	—	—
New Mexico .....	—	—	146	1	—	2	—	3	67	2	—	4
Arizona .....	—	14	273	—	—	4	—	—	193	8	—	20
Utah .....	—	6	33	2	—	—	—	—	51	2	1	1
Nevada .....	—	2	44	—	—	—	—	—	31	4	—	—
PACIFIC .....	7	70	3,255	1	3	77	—	8	2,943	60	11	275
Washington .....	2	7	260	—	—	6	—	5	392	—	1	6
Oregon .....	1	9	176	—	—	2	—	2	236	1	—	7
California .....	4	54	2,559	1	3	67	—	1	2,290	59	10	254
Alaska .....	—	—	67	—	—	1	—	—	25	—	—	8
Hawaii .....	—	---	193	—	---	1	---	---	---	---	---	---
Guam* .....	—	—	31	—	—	—	—	—	—	—	—	—
Puerto Rico .....	4	17	328	—	—	7	—	—	108	14	—	36
Virgin Islands .....	—	1	2	—	—	—	—	—	2	1	—	—

\*Delayed reports: TB: N.C. delete 2, Ky. delete 2, Guam 3  
RMSF: S.C. 1  
Gonorrhea: La. delete 1, Wyo. 13, Guam 69

Syphilis: Fla. 36, Guam 1  
Rabies: La. delete 1, Mont. 9

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING SEPTEMBER 1, 1973

Week No.

35

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	718	452	32	30	SOUTH ATLANTIC	1,080	590	37	5
Boston, Mass.	218	120	15	17	Atlanta, Ga.	136	73	6	6
Bridgeport, Conn.	50	34	1	1	Baltimore, Md.	225	116	6	3
Cambridge, Mass.	29	21	3	4	Charlotte, N. C.	55	23	3	1
Fall River, Mass.	36	31	1	1	Jacksonville, Fla.	68	33	1	5
Hartford, Conn.	59	36	1	2	Miami, Fla.	121	63	5	4
Lowell, Mass.	25	17	1	1	Norfolk, Va.	67	37	4	7
Lynn, Mass.	18	12	1	—	Richmond, Va.	75	40	7	1
New Bedford, Mass.	24	19	1	1	Savannah, Ga.	40	24	1	—
New Haven, Conn.	56	32	4	—	St. Petersburg, Fla.	58	46	—	2
Providence, R. I.	52	34	1	3	Tampa, Fla.	72	33	2	2
Somerville, Mass.	10	8	—	—	Washington, D. C.	117	73	2	—
Springfield, Mass.	50	30	2	—	Wilmington, Del.	46	29	—	—
Waterbury, Conn.	30	19	1	—	EAST SOUTH CENTRAL	659	363	25	22
Worcester, Mass.	61	39	—	—	Birmingham, Ala.	105	54	8	2
MIDDLE ATLANTIC	2,820	1,740	86	130	Chattanooga, Tenn.	47	23	—	3
Albany, N. Y.	53	29	3	1	Knoxville, Tenn.	45	26	—	6
Allentown, Pa.	29	23	—	2	Louisville, Ky.	97	56	3	1
Buffalo, N. Y.	132	83	3	12	Memphis, Tenn.	158	74	8	2
Camden, N. J.	33	22	2	2	Mobile, Ala.	64	40	—	3
Elizabeth, N. J.	30	19	—	1	Montgomery, Ala.	36	23	2	5
Erie, Pa.	47	30	—	4	Nashville, Tenn.	107	67	4	—
Jersey City, N. J.	60	41	1	2	WEST SOUTH CENTRAL	1,392	756	77	40
Newark, N. J.	61	36	4	3	Austin, Tex.	54	36	1	4
New York City, N. Y. †	1,454	885	52	51	Baton Rouge, La.	49	26	4	1
Paterson, N. J.	48	27	2	2	Corpus Christi, Tex.	39	22	1	—
Philadelphia, Pa.	298	175	11	24	Dallas, Tex.	191	96	12	2
Pittsburgh, Pa.	177	102	3	7	El Paso, Tex.	60	30	5	4
Reading, Pa.	43	35	—	2	Fort Worth, Tex.	118	67	9	4
Rochester, N. Y.	116	82	4	7	Houston, Tex.	276	139	13	3
Schenectady, N. Y.	21	11	—	—	Little Rock, Ark.	68	38	2	3
Scranton, Pa.	23	18	—	—	New Orleans, La.	162	83	11	4
Syracuse, N. Y.	79	52	1	3	Oklahoma City, Okla. *	97	57	5	2
Trenton, N. J.	57	32	—	3	San Antonio, Tex.	162	91	9	3
Utica, N. Y.	20	15	—	1	Shreveport, La.	59	31	4	4
Yonkers, N. Y.	39	23	—	3	Tulsa, Okla.	57	40	1	6
EAST NORTH CENTRAL	2,441	1,390	82	75	MOUNTAIN	500	280	18	16
Akron, Ohio	66	41	4	—	Albuquerque, N. Mex.	36	15	—	5
Canton, Ohio	40	21	—	3	Colorado Springs, Colo.	37	24	—	1
Chicago, Ill.	625	342	23	5	Denver, Colo.	107	61	3	5
Cincinnati, Ohio	157	92	2	4	Las Vegas, Nev.	45	22	2	—
Cleveland, Ohio	182	101	2	2	Ogden, Utah	16	8	—	2
Columbus, Ohio	138	77	7	4	Phoenix, Ariz.	106	57	6	1
Dayton, Ohio	105	63	5	5	Pueblo, Colo.	26	15	—	—
Detroit, Mich.	328	170	9	7	Salt Lake City, Utah	69	45	4	2
Evansville, Ind.	39	29	—	5	Tucson, Ariz.	58	33	3	—
Fort Wayne, Ind.	59	38	2	4	PACIFIC	1,559	982	47	35
Gary, Ind.	29	14	2	—	Berkeley, Calif.	27	21	—	1
Grand Rapids, Mich.	49	28	1	10	Fresno, Calif.	51	23	2	—
Indianapolis, Ind.	139	82	10	3	Glendale, Calif.	37	30	—	—
Madison, Wis.	38	20	3	9	Honolulu, Hawaii	36	18	4	2
Milwaukee, Wis.	145	93	2	4	Long Beach, Calif.	109	62	1	1
Peoria, Ill.	37	22	5	3	Los Angeles, Calif.	499	323	13	13
Rockford, Ill.	51	28	2	1	Oakland, Calif.	67	46	2	—
South Bend, Ind.	41	26	1	2	Pasadena, Calif.	28	23	2	1
Toledo, Ohio	108	61	2	2	Portland, Oreg.	108	69	3	—
Youngstown, Ohio	65	42	—	2	Sacramento, Calif.	48	28	3	1
WEST NORTH CENTRAL	810	485	58	23	San Diego, Calif.	105	67	4	—
Des Moines, Iowa	64	37	3	—	San Francisco, Calif.	167	102	4	6
Duluth, Minn.	29	18	1	3	San Jose, Calif.	43	26	—	—
Kansas City, Kans.	28	13	2	2	Seattle, Wash.	139	79	8	5
Kansas City, Mo.	114	74	6	—	Spokane, Wash.	53	36	1	3
Lincoln, Nebr.	24	17	1	1	Tacoma, Wash.	42	29	—	2
Minneapolis, Minn.	111	69	10	1	Total	11,979	7,038	462	422
Omaha, Nebr.	85	42	12	—	Expected Number	12,070	6,816	547	391
St. Louis, Mo.	206	109	16	7	Cumulative Total (includes reported corrections for previous weeks)	453,471	266,818	16,915	18,518
St. Paul, Minn.	76	54	4	1					
Wichita, Kans.	73	52	3	8					

† Delayed report for week ending Aug. 25, 1973

\* Estimate based on average percent of divisional total

## HEPATITIS-B — Continued

the patient's mother) admitted to a history of accidental needle puncture. Although inapparent parenteral exposure is the most likely explanation, this hypothesis fails to explain the mode of transmission for the animal caretaker and the patient's mother. Consequently, nonparenteral spread of hepatitis-B must be strongly considered (1). Second, there is evidence that patients on chemotherapy develop high titers of HBsAg and may convert from HBsAb-positive to HBsAg-positive (2). Third, although the presence of HBsAb is associated with immunity, 1 recent study (3) noted that a small percentage of antibody-positive individuals became ill with

hepatitis-B following exposure to HBsAg-positive blood. It was not clear why antibody failed to confer immunity in this group; reinfection with a different subtype of HBsAg or ineffective antibody neutralization were cited as possible reasons.

## References

1. Bryan JA, Carr HE, Gregg MB: An outbreak of non-parenterally transmitted hepatitis-B. *JAMA* 223:279-283, 1973
2. Wands JR, Roll J, Chura C, et al: Serial studies of hepatitis-associated antigen and antibody in patients receiving chemotherapy for myeloproliferative and lymphoproliferative disorders. *J Clin Invest* 52(6):87a, 1973 (abstract)
3. Barker LF, Peterson MR, Shulman NR, et al: Antibody responses in viral hepatitis, type B. *JAMA* 223:1005-1008, 1973

## FATAL FALCIPARUM MALARIA — Massachusetts, Georgia

## Massachusetts

On January 9, 1973, one day after arriving in the United States from Nairobi, Kenya, a previously healthy 65-year-old woman experienced fatigue and malaise, which progressed 2 days later to fever, non-productive cough, and myalgia. When seen in a private physician's office on January 13, her physical examination was unremarkable. She was thought to have influenza since epidemic influenza was then present in the community. On the night of January 14, she collapsed and was taken to a local hospital but died soon after. Both a peripheral smear and pathologic study of many tissues revealed a high concentration of ring forms of *Plasmodium falciparum*. Autopsy also revealed a completely atrophic spleen weighing less than 10 gm.

The patient had traveled in Kenya from December 17 to January 7, 1973, and had made several trips to bush areas in the southern and western parts of the country. From December 23 to 29 she camped out and had heavy mosquito exposure. All members of her party took pyrimethamine prophylaxis (25 mg orally once a week), but it is not known if the patient took the drug regularly.

(Reported by David L. Singer, M.D., Lexington, Massachusetts; and an EIS Officer.)

## Georgia

In August 1973, while traveling in Zaire, a previously healthy 20-year-old woman from Atlanta, Georgia, began to feel sick and depressed. She arrived in Atlanta on August 11 and on August 13 returned to work where she was noted to be pale, weak, and thin. She complained of hot flashes and diarrhea with mucus. On August 14, she had to be brought home from work because of illness, and on the night of August 15 she fainted. After recovering consciousness, she was disoriented, pale, and short of breath. She then lapsed into a coma. She was taken to the emergency room of a local hospital but was pronounced dead on arrival.

The patient had departed for her 4-week trip on July 7, traveling directly to Kinshasa and then on to Katanga. She remained in Katanga until August 5 when she flew back to Kinshasa and then on August 8 left on a direct flight to New York.

At no time did she take antimalarial drugs or consult a physician. It is not known whether she had fever during her illness, but there was no history of drug abuse, recent blood transfusion, or previous malaria.

At postmortem examination, there was no rash. Jaundice was present, and there were old ecchymoses but no fresh hemorrhages. There was hepatosplenomegaly, and the lungs were edematous. Examination of histopathologic sections is pending. Thick and thin smears of peripheral blood examined at CDC revealed heavy parasitemia with *P. falciparum*.

(Reported by Saleh A. Zaki, M.D., Fulton County Medical Examiner; J. F. Hackney, M.D., District Director of Public Health, Fulton County Health Department; John E. McCroan, Ph.D., State Epidemiologist, Georgia Department of Human Resources; the General Parasitology Branch, Bureau of Laboratories, the Parasitic Diseases Branch, Bureau of Epidemiology, CDC.)

## Editorial Note

Between 1963 and 1972, 42 fatal cases of malaria were reported in the United States; 37 were caused by *P. falciparum*. The death rate for falciparum malaria cases reported to CDC has been only 0.2% for patients treated in military or Veteran's Administration hospitals compared with 5.7% for patients treated in civilian facilities. This difference in death rates is due, in part, to delay in diagnosis of malaria in non-military institutions: for fatal civilian cases a median of 4 days elapsed between date of admission and diagnosis, whereas the median for military cases was less than 1 day.

Malaria transmission occurs in most areas of Kenya and Zaire (1). Both patients were in malarious areas; one took no chemoprophylaxis, the other took pyrimethamine. Resistance to pyrimethamine has been reported for both falciparum and vivax malaria and has been documented in East Africa. In addition, the presence of an atrophic spleen may have contributed to the rapid death of the patient from Massachusetts since lack of a functioning spleen is considered to substantially reduce host resistance to both *P. falciparum* and *P. vivax*.

These cases illustrate that falciparum malaria can present with an acute, fulminating course and can be seen at anytime in nonmalarious areas like the United States. Diagnosis of the diseases requires a high index of suspicion and a careful travel history from every patient presenting with fever of unknown origin.

## Reference

1. World Health Organization. *Weekly Epidemiological Record* 48(3):25-45, 1973

## INTERNATIONAL NOTES

## CHOLERA – Italy

On August 29, 1973, Italian officials notified the World Health Organization (WHO) of an outbreak of cholera in 2 localities south of Naples. The responsible organism was *Vibrio cholerae*, biotype El Tor, serotype Ogawa.

As of September 5, 1973, 60 confirmed cases of cholera from the Naples area and 10 confirmed cases from the vicinity of Bari have been reported to WHO, with a total of 4 deaths. Only 2 provinces, Naples and Bari, are considered to have been infected areas, and, as a result of control measures taken there, there has been a marked decrease in the number of new cases. The possibility remains that persons infected in these areas will be detected or diagnosed in other towns, but transmission outside the uninfected areas has not been confirmed. Epidemiologic investigation by local authorities has tended to support the thesis that infected imported mussels were the origin of the outbreak.

(Reported by the World Health Organization, Weekly Epidemiological Record, Vol. 48, Nos. 35 and 36, 1973.)

## Editorial Note

Cholera vaccination is not required for anyone entering the United States from abroad. Cholera vaccination is recommended for travelers to cholera-infected areas to facilitate their subsequent travel to other countries, which may require

presentation of a validated vaccination certificate. A validated certificate for a single primary or booster dose within the past 6 months satisfies international health regulations. Some countries may initiate more stringent requirements, such as evidence of a complete primary series. The list of currently infected areas includes:

Angola	Mauritania
Bangladesh	Niger
Cameroon	Nigeria
Ghana	Philippines
India	Senegal
Indonesia	Thailand
Italy	Tunisia
Khmer Republic	Upper Volta
Liberia	Vietnam (Republic of)
Malaysia	

## Erratum, Vol. 22, No. 33, p. 280

In "Table III. Cases of Specified Notifiable Diseases: United States," the years under the headings MALARIA, MEASLES (Rubeola), MENINGOCOCCAL INFECTIONS, TOTAL, MUMPS, and RUBELLA were printed incorrectly. The year 1973 should be substituted for every 1972, and the year 1972 should be substituted for every 1971.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to: Center for Disease Control  
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PUBLIC HEALTH SERVICE

CENTER FOR DISEASE CONTROL  
ATLANTA, GEORGIA 30333

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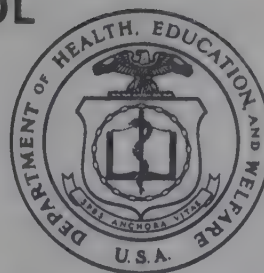
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# Morbidity and Mortality



Vol. 22, No. 36

WEEKLY  
REPORTFor  
Week Ending  
September 8, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE

DATE OF RELEASE: SEPTEMBER 14, 1973 - ATLANTA, GEORGIA 30333

## EPIDEMIOLOGIC NOTES AND REPORTS

## FOLLOW-UP ON CHOLERA - Texas

Investigation of the single confirmed case of cholera in Port Lavaca, Texas, reported last week (MMWR, Vol. 22, No. 35) has revealed no spread of the disease. Multiple cultures taken from possible contacts and epidemiologically incriminated water and food products have not grown cholera organisms. *Vibrio cholerae* was recovered from the patient's septic tank, however, and non-cholera vibrios were found in the septic tank of a motel adjacent to the patient's home. Water from the motel's well also supplies the patient's home, and fluorescein dye placed in the motel's sewage system appeared in the well water. An investigation is currently in progress to locate recent motel guests and to obtain histories, rectal swabs, and serum specimens from them. Local health officials have been advised of the presence of these possible

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contacts or carriers in their counties. The motel has been closed, and both septic tanks have been sealed.

(Reported by J. C. McGuire, M.D., Health Director, Clayton Tolson, Sanitarian, Calhoun County Health Department; M. S. Dickerson, M.D., State Epidemiologist, J. E. Peavy, M.D., State Health Officer, Texas State Department of Health; the Enterobacteriology Section, Bacteriology Branch, Bureau of Laboratories, the Bacterial Diseases Branch, Bureau of Epidemiology, CDC; and an EIS Officer.)

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	36th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 36 WEEKS		
	September 8, 1973	September 9, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	142	199	192	2,804	2,272	2,356
Brucellosis	2	4	4	132	125	144
Chickenpox	164	284	—	144,896	113,953	—
Diphtheria	—	—	4	118	71	110
Encephalitis, primary:						
Arthropod-borne and unspecified	37	27	40	954	679	793
Encephalitis, post-infectious	4	2	3	212	212	278
Hepatitis, serum (Hepatitis B)	116	116	111	5,496	6,304	4,947
Hepatitis, infectious (Hepatitis A)	749	835	845	34,654	37,828	37,829
Malaria	3	5	51	163	678	1,932
Measles (rubeola)	67	95	122	24,160	26,845	26,845
Meningococcal infections, total	12	13	23	1,035	999	1,845
Civilian	12	12	19	1,011	960	1,657
Military	—	1	1	24	39	188
Mumps	253	283	494	55,086	56,561	75,549
Rubella (German measles)	77	128	208	25,927	20,813	43,594
Tetanus	—	—	4	60	77	81
Tuberculosis, new active	500	524	—	21,732	23,202	—
Tularemia	—	3	3	114	99	103
Typhoid fever	13	1	11	481	235	234
Typhus, tick-borne (Rky. Mt. spotted fever)	22	10	11	533	411	337
Venereal Diseases:						
Gonorrhea	14,280	15,358	—	559,644	505,621	—
Syphilis, primary and secondary	404	507	—	17,882	16,975	—
Rabies in animals	31	67	58	2,540	3,002	2,498

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	3
Botulism:	13	Paralytic:	3
Congenital rubella syndrome:	19	Psittacosis:	16
Leprosy: Hawaii-2, Tex.-2:	90	Rabies in man:	—
Leptospirosis:	22	Trichinosis: Md.-3:	69
Plague:	2	Typhus, murine: *	26

\*Delayed reports: Typhus, Murine: Tex.-1

## SHIGELLOSIS — Minnesota

Beginning in late March, a slightly increased number of culture-proven cases of shigellosis in Minnesota was noted by the State Laboratory. This small increase continued until late June, when a sharp upsurge began; cases peaked in the week ending August 11, when 65 were reported. This brought the number of cases reported for the first 32 weeks of 1973 to 447, compared with a total of 72 for 1972 and 201 for 1971. Almost all isolates were *Shigella sonnei*, resistant *in vitro* to ampicillin and tetracycline, but sensitive to sulfasoxazole and chloramphenicol among other antibiotics.

An estimated 15% of those ill were hospitalized; most initially had high fever and abdominal pain, with diarrhea often occurring somewhat later. Most of those hospitalized responded well to fluid and electrolyte management and routine supportive care.

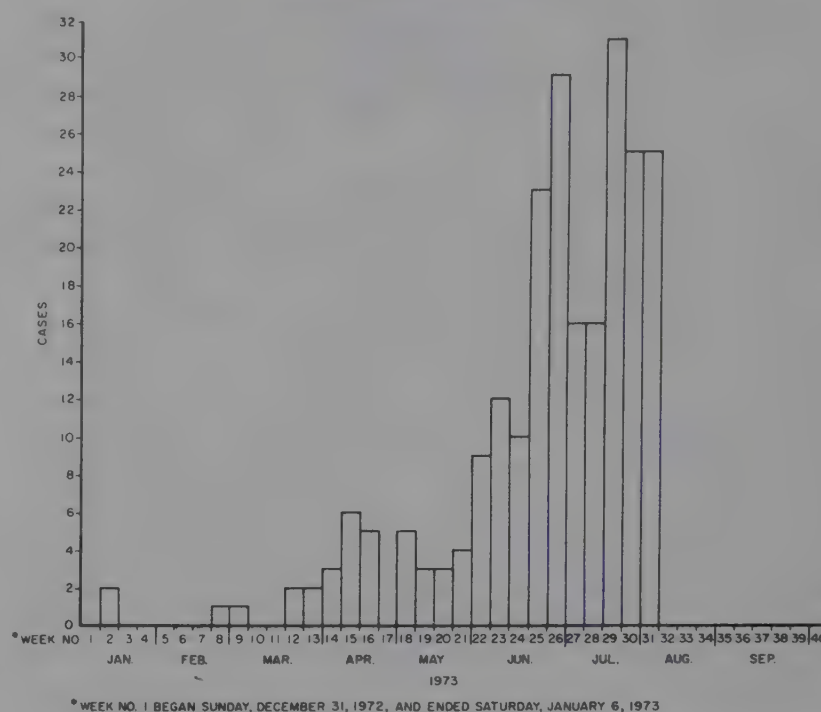
Preliminary investigation in July revealed that approximately half of the reported cases were in Minneapolis, and about half of these were clustered in a 3.4 square-mile, low-income area on the north side of the city. No common source of infection was apparent. Almost 50% of all persons affected were under age 10, but many were adults who had presented with acute abdominal pain suggestive of surgical, gynecologic, or other types of problems.

By mid-August 233 cases had been reported in Minneapolis (Figure 1). The sharp rise in weekly cases from late June to mid-August paralleled the experience for the entire state. Although initially cases were clustered in the north of the city, by early August more new cases were appearing on the south side than on the north. Hospitalizations continued, but no shigellosis-associated deaths were reported.

Interviews with physicians, nurses, and others familiar with the outbreak suggested that person-to-person, fecal-oral transmission was likely and that no single source was responsible. Several members of the same family were usually affected, and many gave a history of direct or indirect contact with children in summer camps and in day-care and community centers.

A total of 55 Minneapolis households experiencing illness within the previous month were surveyed. Information on dates of onset, symptoms, treatment, personal contacts, and potential means of transmission was obtained from 51. Analysis of the data showed that 155 (65%) of the 239 residents were ill with symptoms compatible with shigellosis, of whom 56 (23%) were culture-positive; however, few of the

Figure 1  
*SHIGELLA SONNEI* CASES BY WEEK OF CULTURE  
MINNEAPOLIS, MINNESOTA  
FIRST 31 WEEKS, 1973



others were cultured. Secondary attack rates in families averaged 54%.

Local health officers throughout the state, physicians, nurses, and other health-care providers have been notified of the epidemic and advised of current recommendations regarding hygiene, isolation, and antibiotic use. Additional studies to determine the virulence of the *S. sonnei* organism in this epidemic based on data from hospitalized patients' charts and from laboratory investigations are in progress. In the 2 weeks since the investigation began only 30 and 13 new cases, respectively, were reported statewide. Concurrent investigation of Minneapolis day-care centers is also under way to determine the specific role of these facilities in transmission of disease.

(Reported by C. A. Smith, M.D., Commissioner, Minneapolis Health Department; D. S. Fleming, M.D., Chief, Disease Prevention and Control Section, Henry Bauer, Ph.D., Director, Division of Medical Laboratories, Minnesota State Department of Health; and 2 EIS Officers.)

FOOD POISONING DUE TO *SALMONELLA CHESTER* — Massachusetts

Between April 10 and 25, 1973, 57 persons in Massachusetts became ill with fever, headache, nausea, vomiting, cramps, and diarrhea after eating at a roadside sandwich bar. The interval between eating at the sandwich bar and onset of illness ranged from 6 to 60 hours (average 19 hours). Sixteen persons were hospitalized. Stool specimens from 40 of the 57 ill persons were positive for *Salmonella chester*.

Epidemiologic investigation by the Division of Communicable Diseases, Massachusetts Department of Public Health, revealed that most cases occurred in travelers who lived throughout the state. Food history questionnaires showed that all 57 persons who became ill had eaten roast beef sandwiches from the implicated sandwich bar; 7 companions who had eaten roast beef sandwiches, and 4 who had eaten other kinds of sandwiches remained well.

Inspection of the sandwich bar revealed inadequate sanitation. Specifically, in early April sewage had backed up into a sink in the food preparation area. *S. chester* was isolated from samples of roast beef and environmental swabs taken from the holding pans, the meat slicer, and a scrub brush. In addition, stool specimens from all 3 foodhandlers were positive for the organism.

The sandwich bar was closed on April 23. Four additional cases were reported in 3 family members of previous cases and in a child of the owner of the sandwich bar.

(Reported by Nicholas J. Fiumara, M.D., Director, Joseph Kowal, Epidemiologist, Division of Communicable Diseases, Massachusetts Department of Public Health; and an EIS Officer.)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING SEPTEMBER 8, 1973 AND SEPTEMBER 9, 1972 (36th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
	1973	1973	1973	1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES .....	142	2	164	-	118	37	27	4	116	749	835
NEW ENGLAND .....	38	-	15	-	3	5	1	-	1	73	57
Maine .....	2	-	-	-	-	-	-	-	-	3	13
New Hampshire* .....	1	-	-	-	-	-	-	-	1	4	10
Vermont .....	-	-	-	-	-	-	-	-	-	-	1
Massachusetts .....	17	-	12	-	1	3	1	-	-	29	15
Rhode Island .....	18	-	1	-	2	-	-	-	-	13	5
Connecticut .....	-	-	2	-	-	2	-	-	-	24	13
MIDDLE ATLANTIC .....	18	-	15	-	-	5	6	2	21	104	143
Upstate New York .....	1	-	-	-	-	-	4	1	1	31	40
New York City .....	-	-	15	-	-	-	-	-	3	11	28
New Jersey .....	15	-	NN	-	-	1	-	-	10	31	46
Pennsylvania .....	2	-	-	-	-	4	2	1	7	31	29
EAST NORTH CENTRAL .....	27	-	70	-	-	14	7	2	31	107	82
Ohio .....	12	-	5	-	-	10	5	-	15	28	24
Indiana .....	-	-	4	-	-	-	-	-	-	6	12
Illinois .....	-	-	-	-	-	1	-	1	9	9	22
Michigan .....	15	-	-	-	-	3	2	1	7	60	22
Wisconsin .....	-	-	61	-	-	-	-	-	-	4	2
WEST NORTH CENTRAL .....	2	-	13	-	7	7	1	-	6	35	38
Minnesota .....	2	-	1	-	-	5	-	-	2	10	3
Iowa .....	-	-	10	-	-	-	-	-	1	1	9
Missouri .....	-	-	-	-	-	2	1	-	2	10	15
North Dakota .....	-	-	2	-	-	-	-	-	-	-	2
South Dakota .....	-	-	-	-	7	-	-	-	-	1	1
Nebraska .....	-	-	-	-	-	-	-	-	1	1	-
Kansas .....	-	-	-	-	-	-	-	-	-	12	8
SOUTH ATLANTIC .....	27	1	9	-	-	3	6	-	16	178	110
Delaware .....	-	-	-	-	-	-	-	-	-	1	6
Maryland .....	3	-	-	-	-	-	2	-	2	16	15
District of Columbia .....	1	-	1	-	-	-	-	-	-	4	4
Virginia .....	8	-	-	-	-	2	2	-	4	26	13
West Virginia .....	3	-	3	-	-	-	-	-	-	2	3
North Carolina .....	4	-	NN	-	-	1	1	-	1	13	22
South Carolina .....	1	-	5	-	-	-	-	-	1	21	6
Georgia .....	-	-	-	-	-	-	-	-	-	15	8
Florida .....	7	1	-	-	-	-	1	-	8	80	33
EAST SOUTH CENTRAL .....	13	1	7	-	-	-	-	-	15	63	61
Kentucky .....	-	-	5	-	-	-	-	-	8	10	27
Tennessee .....	4	1	NN	-	-	-	-	-	5	38	26
Alabama .....	8	-	-	-	-	-	-	-	-	13	6
Mississippi .....	1	-	2	-	-	-	-	-	2	2	2
WEST SOUTH CENTRAL .....	10	-	8	-	14	3	1	-	13	117	128
Arkansas* .....	-	-	-	-	-	-	-	-	1	1	31
Louisiana .....	4	-	NN	-	-	-	-	-	6	26	8
Oklahoma .....	3	-	-	-	-	1	-	-	2	14	20
Texas* .....	3	-	8	-	14	2	1	-	4	76	69
MOUNTAIN .....	2	-	6	-	14	-	-	-	-	33	42
Montana .....	2	-	1	-	-	-	-	-	-	2	2
Idaho .....	-	-	-	-	-	-	-	-	-	5	6
Wyoming .....	-	-	3	-	-	-	-	-	-	-	-
Colorado .....	-	-	-	-	-	-	-	-	-	11	-
New Mexico .....	-	-	-	-	6	-	-	-	-	7	2
Arizona* .....	-	-	-	-	8	-	-	-	-	-	15
Utah .....	-	-	2	-	-	-	-	-	-	1	10
Nevada .....	-	-	-	-	-	-	-	-	-	7	7
PACIFIC .....	5	-	21	-	80	-	5	-	13	39	174
Washington .....	4	-	5	-	72	-	-	-	10	21	18
Oregon .....	1	-	1	-	3	-	-	-	3	13	18
California .....	---	---	---	---	3	---	5	---	---	---	134
Alaska .....	-	-	1	-	2	-	-	-	-	1	-
Hawaii .....	-	-	14	-	-	-	-	-	-	4	4
Guam* .....	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	-	4	-	-	-	-	-	-	8	6
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: Tex. 7  
Chickenpox: Tex. 19  
Encephalitis, primary: N. H. 1

Hepatitis B: Tex. 4, Ariz. 1  
Hepatitis A: Ark. 6, Tex. 77, Ariz. 13, Guam 3

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING SEPTEMBER 8, 1973 AND SEPTEMBER 9, 1972 (36th WEEK) — Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES . . . . .	3	163	67	24,160	26,845	12	1,035	999	253	55,086	77	25,927
NEW ENGLAND . . . . .	—	12	4	7,372	3,109	—	46	41	25	2,844	5	3,629
Maine . . . . .	—	—	—	64	244	—	1	3	1	325	—	68
New Hampshire . . . . .	—	—	—	857	229	—	6	3	2	190	—	375
Vermont . . . . .	—	2	—	118	125	—	3	—	1	245	1	47
Massachusetts . . . . .	—	6	2	3,927	694	—	12	19	12	836	1	2,041
Rhode Island . . . . .	—	—	1	604	523	—	3	10	3	335	1	213
Connecticut . . . . .	—	4	1	1,802	1,294	—	21	6	6	913	2	885
MIDDLE ATLANTIC . . . . .	—	25	17	2,446	996	—	140	122	26	7,198	9	4,181
Upstate New York . . . . .	—	13	3	798	125	—	48	32	NN	NN	4	421
New York City . . . . .	—	2	6	894	327	—	29	37	20	4,516	3	465
New Jersey . . . . .	—	4	6	407	486	—	33	24	2	1,491	—	3,004
Pennsylvania . . . . .	—	6	2	347	58	—	30	29	4	1,191	2	291
EAST NORTH CENTRAL . . . . .	1	22	24	8,474	11,009	1	128	145	43	14,150	20	5,922
Ohio . . . . .	—	4	1	281	245	—	55	57	1	2,666	1	685
Indiana . . . . .	—	3	2	631	1,238	—	4	11	6	1,183	4	937
Illinois . . . . .	—	11	8	2,052	4,096	—	24	32	3	2,386	5	941
Michigan . . . . .	1	4	5	4,358	1,980	1	40	39	8	3,901	—	1,823
Wisconsin . . . . .	—	—	8	1,152	3,450	—	5	6	25	4,014	10	1,536
WEST NORTH CENTRAL . . . . .	—	7	—	439	938	1	80	70	19	4,610	1	1,206
Minnesota . . . . .	—	1	—	19	20	1	8	21	—	80	—	221
Iowa . . . . .	—	1	—	277	652	—	19	2	17	2,809	1	188
Missouri . . . . .	—	1	—	52	163	—	32	20	2	673	—	263
North Dakota . . . . .	—	1	—	58	52	—	3	—	—	66	—	276
South Dakota . . . . .	—	—	—	—	6	—	4	2	—	18	—	23
Nebraska . . . . .	—	1	—	6	18	—	7	9	—	128	—	140
Kansas . . . . .	—	2	—	27	27	—	7	16	—	836	—	95
SOUTH ATLANTIC . . . . .	—	24	10	1,206	2,147	5	176	224	50	6,510	24	2,108
Delaware . . . . .	—	—	—	8	50	—	—	1	—	264	—	13
Maryland . . . . .	—	3	—	12	15	—	23	34	1	628	—	10
District of Columbia . . . . .	—	1	—	5	2	—	4	9	5	110	—	3
Virginia . . . . .	—	5	2	416	60	3	34	49	6	693	—	620
West Virginia* . . . . .	—	—	5	204	271	—	3	7	—	2,231	6	293
North Carolina . . . . .	—	7	—	4	33	—	37	27	NN	NN	—	201
South Carolina . . . . .	—	1	1	59	215	—	12	20	—	352	—	84
Georgia . . . . .	—	3	1	152	166	—	21	15	—	31	—	12
Florida . . . . .	—	4	1	346	1,335	2	42	62	38	2,201	18	872
EAST SOUTH CENTRAL . . . . .	2	8	—	598	1,040	2	93	79	28	4,520	8	1,306
Kentucky . . . . .	2	3	—	367	521	—	32	25	11	1,324	1	391
Tennessee . . . . .	—	—	—	165	191	2	39	28	15	2,089	4	523
Alabama . . . . .	—	5	—	9	146	—	15	16	2	650	—	186
Mississippi . . . . .	—	—	—	57	182	—	7	10	—	457	3	206
WEST SOUTH CENTRAL . . . . .	—	9	5	674	1,471	2	164	124	32	3,696	4	1,439
Arkansas . . . . .	—	—	—	69	13	—	13	9	1	354	—	112
Louisiana . . . . .	—	2	—	84	84	2	38	36	8	85	—	99
Oklahoma . . . . .	—	1	—	53	10	—	29	6	1	431	1	178
Texas* . . . . .	—	6	5	468	1,364	—	84	73	22	2,826	3	1,050
MOUNTAIN . . . . .	—	9	3	722	1,821	—	31	21	11	2,445	5	2,375
Montana . . . . .	—	1	1	17	16	—	6	4	1	233	—	502
Idaho . . . . .	—	—	1	253	82	—	4	5	—	110	4	39
Wyoming . . . . .	—	—	—	80	51	—	—	1	1	421	—	6
Colorado . . . . .	—	2	—	105	522	—	11	5	5	442	—	1,541
New Mexico . . . . .	—	2	1	121	121	—	3	2	2	963	1	192
Arizona . . . . .	—	4	—	17	874	—	3	1	—	140	—	18
Utah* . . . . .	—	—	—	128	155	—	2	2	2	128	—	74
Nevada . . . . .	—	—	—	1	—	—	2	1	—	8	—	3
PACIFIC . . . . .	—	47	4	2,229	4,314	1	177	173	19	9,113	1	3,761
Washington . . . . .	—	3	2	1,012	977	1	19	15	1	1,410	—	660
Oregon . . . . .	—	3	2	456	130	—	12	14	11	1,697	1	784
California . . . . .	—	38	—	677	3,099	—	140	133	—	5,054	—	2,282
Alaska . . . . .	—	2	—	65	12	—	6	8	2	693	—	9
Hawaii . . . . .	—	1	—	19	96	—	—	3	5	259	—	26
Guam* . . . . .	—	—	—	49	12	—	—	11	—	19	—	12
Puerto Rico . . . . .	—	—	9	1,790	633	—	8	4	4	687	1	27
Virgin Islands . . . . .	—	—	—	1	2	—	—	2	1	23	—	2

\*Delayed reports: Measles: Tex. 16, Utah 126, Guam 1  
Meningococcal infections: W. Va. 1

Mumps: Tex. 23, Guam 1  
Rubella: Utah 5

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING SEPTEMBER 8, 1973 AND SEPTEMBER 9, 1972 (36th WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES .....	60	500	21,732	114	13	481	22	533	14,280	404	31	2,540
NEW ENGLAND .....	2	17	785	—	2	11	—	1	244	8	—	99
Maine .....	—	5	66	—	—	—	—	—	29	—	—	55
New Hampshire .....	—	—	42	—	—	—	—	—	23	1	—	35
Vermont .....	—	—	22	—	—	—	—	—	5	—	—	3
Massachusetts .....	—	4	414	—	2	11	—	1	—	—	—	5
Rhode Island .....	1	3	63	—	—	—	—	—	40	2	—	—
Connecticut .....	1	5	178	—	—	—	—	—	147	5	—	1
MIDDLE ATLANTIC .....	7	110	4,246	—	4	47	—	30	2,315	113	3	36
Upstate New York .....	1	16	753	—	1	7	—	13	440	8	3	17
New York City .....	3	40	1,586	—	1	16	—	4	918	59	—	—
New Jersey .....	2	15	744	—	2	15	—	5	505	22	—	—
Pennsylvania .....	1	39	1,163	—	—	9	—	8	452	24	—	19
EAST NORTH CENTRAL .....	10	111	3,328	3	3	30	—	19	1,873	33	6	251
Ohio *. .....	3	39	987	—	1	12	—	14	376	6	3	32
Indiana .....	1	19	442	—	—	—	—	—	351	7	—	51
Illinois .....	3	32	992	1	1	7	—	5	283	2	1	65
Michigan .....	1	21	830	2	1	9	—	—	512	13	2	7
Wisconsin .....	2	—	77	—	—	2	—	—	351	5	—	96
WEST NORTH CENTRAL .....	5	35	894	12	—	21	—	18	955	5	11	807
Minnesota .....	—	2	106	—	—	4	—	—	137	2	6	288
Iowa .....	—	—	89	—	—	—	—	7	57	1	4	165
Missouri .....	4	24	420	11	—	12	—	7	500	—	1	79
North Dakota .....	1	1	31	—	—	—	—	—	21	1	—	129
South Dakota .....	—	3	66	—	—	1	—	—	34	—	—	77
Nebraska .....	—	3	62	—	—	1	—	2	75	—	—	3
Kansas .....	—	2	120	1	—	3	—	2	131	1	—	66
SOUTH ATLANTIC .....	12	94	4,307	9	1	233	12	271	4,528	163	6	221
Delaware .....	—	5	66	—	—	—	—	7	120	2	—	3
Maryland .....	—	14	465	—	—	6	1	13	429	13	—	13
District of Columbia*. ..	—	1	195	—	—	—	—	—	402	31	—	—
Virginia .....	2	15	562	3	—	3	1	54	330	14	—	63
West Virginia*. ..	—	5	203	—	—	2	—	4	60	—	1	22
North Carolina .....	—	14	709	1	—	5	5	122	598	15	—	1
South Carolina .....	1	—	346	—	—	4	—	29	802	26	—	5
Georgia .....	2	22	717	3	—	1	5	41	949	20	3	75
Florida .....	7	18	1,044	2	1	212	—	1	838	42	2	39
EAST SOUTH CENTRAL .....	7	38	1,937	10	2	31	8	86	1,222	21	4	362
Kentucky .....	1	6	453	1	—	4	—	—	102	2	1	196
Tennessee .....	4	11	593	7	2	11	3	42	543	10	3	126
Alabama .....	2	16	528	—	—	10	5	17	253	6	—	39
Mississippi .....	—	5	363	2	—	6	—	27	324	3	—	1
WEST SOUTH CENTRAL .....	10	54	2,236	76	—	21	2	92	2,047	49	1	455
Arkansas*. ..	—	4	265	53	—	3	1	17	205	2	—	99
Louisiana .....	3	7	348	—	—	6	—	—	286	13	—	36
Oklahoma .....	4	7	190	17	—	2	1	68	177	3	—	137
Texas*. ..	3	36	1,433	6	—	10	—	7	1,379	31	1	183
MOUNTAIN .....	—	28	722	3	—	8	—	8	520	9	—	34
Montana .....	—	—	33	—	—	—	—	1	34	—	—	9
Idaho .....	—	—	26	—	—	—	—	2	—	—	—	—
Wyoming .....	—	—	19	—	—	1	—	1	13	—	—	—
Colorado .....	—	10	130	—	—	1	—	1	167	2	—	—
New Mexico .....	—	4	150	1	—	2	—	3	113	4	—	4
Arizona .....	—	14	287	—	—	4	—	—	163	3	—	20
Utah .....	—	—	33	2	—	—	—	—	30	—	—	1
Nevada .....	—	—	44	—	—	—	—	—	—	—	—	—
PACIFIC .....	7	13	3,277	1	1	79	—	8	576	3	—	275
Washington .....	2	6	266	—	1	7	—	5	287	2	—	6
Oregon .....	1	1	177	—	—	2	—	2	181	—	—	7
California .....	4	—	2,559	1	—	67	—	1	—	—	—	254
Alaska*. ..	—	—	76	—	—	2	—	—	56	1	—	8
Hawaii .....	—	6	199	—	—	1	—	—	52	—	—	—
Guam *. ..	—	—	35	—	—	—	—	—	—	—	—	—
Puerto Rico .....	4	4	332	—	—	7	—	—	58	15	2	38
Virgin Islands .....	—	—	2	—	—	—	—	—	10	—	—	—

\*Delayed reports: TB: Ohio delete 1, Tex. 42, Alaska 9, Guam 4

Tularemia: Tex. 1

Typhoid: Alaska 1

RMSE: Ark. 1

Gonorrhea: Tex. 1,432, Guam 19

Syphilis: D.C. 32, Tex. 30

Rabies: W. Va. 1, Tex. 2

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING SEPTEMBER 8, 1973

Week No.

36

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	706	466	13	34	SOUTH ATLANTIC	954	527	26	34
Boston, Mass.	175	113	1	10	Atlanta, Ga.	111	57	1	4
Bridgeport, Conn.	42	25	1	3	Baltimore, Md.	148	79	4	3
Cambridge, Mass.	26	20	—	3	Charlotte, N. C.	41	24	1	—
Fall River, Mass.	24	16	—	2	Jacksonville, Fla.	66	33	2	4
Hartford, Conn.	60	37	3	1	Miami, Fla.	84	46	3	—
Lowell, Mass.	30	14	—	3	Norfolk, Va.	53	25	3	1
Lynn, Mass.	23	15	1	2	Richmond, Va.	87	56	—	8
New Bedford, Mass.	37	26	—	2	Savannah, Ga.	34	20	2	3
New Haven, Conn.	69	50	3	—	St. Petersburg, Fla.	83	65	3	4
Providence, R. I.	63	35	2	3	Tampa, Fla.	71	37	7	4
Somerville, Mass.	11	11	—	—	Washington, D. C.	146	65	—	2
Springfield, Mass.	46	35	—	5	Wilmington, Del.	30	20	—	1
Waterbury, Conn.	41	24	2	—	EAST SOUTH CENTRAL	565	291	31	25
Worcester, Mass.	59	45	—	—	Birmingham, Ala.	84	33	5	—
MIDDLE ATLANTIC	3,152	1,970	91	197	Chattanooga, Tenn.	34	20	5	3
Albany, N. Y.	48	34	3	3	Knoxville, Tenn.	28	23	—	—
Allentown, Pa.	41	29	—	3	Louisville, Ky.	107	56	1	7
Buffalo, N. Y.	152	88	5	26	Memphis, Tenn.	131	67	9	3
Camden, N. J.	52	29	7	2	Mobile, Ala.	50	27	4	—
Elizabeth, N. J.	22	16	—	1	Montgomery, Ala.	33	17	1	1
Erie, Pa.	31	22	—	2	Nashville, Tenn.	98	48	6	11
Jersey City, N. J.	66	44	—	7	WEST SOUTH CENTRAL	958	517	46	19
Newark, N. J.	74	38	4	5	Austin, Tex.	29	14	—	1
New York City, N. Y. †	1,570	989	31	50	Baton Rouge, La.	34	14	3	1
Paterson, N. J.	53	31	4	2	Corpus Christi, Tex.	16	8	—	—
Philadelphia, Pa.	393	238	7	54	Dallas, Tex.	125	63	5	3
Pittsburgh, Pa.	197	117	12	7	El Paso, Tex.	34	23	—	3
Reading, Pa.	36	24	—	3	Fort Worth, Tex.	74	40	3	—
Rochester, N. Y.	150	111	2	17	Houston, Tex.	194	95	14	1
Schenectady, N. Y.	21	7	—	—	Little Rock, Ark.	26	13	1	2
Scranton, Pa.	33	23	1	1	New Orleans, La.	143	72	5	—
Syracuse, N. Y.	100	56	10	2	Oklahoma City, Okla. *	67	39	3	1
Trenton, N. J.	42	23	5	7	San Antonio, Tex.	98	57	8	—
Utica, N. Y.	20	16	—	—	Shreveport, La.	56	34	1	5
Yonkers, N. Y.	51	35	—	5	Tulsa, Okla.	62	45	3	2
EAST NORTH CENTRAL	2,466	1,439	98	74	MOUNTAIN	472	258	20	16
Akron, Ohio	66	35	6	—	Albuquerque, N. Mex.	67	31	1	7
Canton, Ohio	39	23	2	1	Colorado Springs, Colo.	34	18	1	4
Chicago, Ill.	676	363	30	22	Denver, Colo.	83	46	2	1
Cincinnati, Ohio	135	78	8	4	Las Vegas, Nev.	42	20	1	—
Cleveland, Ohio	176	93	7	6	Ogden, Utah	15	11	1	1
Columbus, Ohio	140	80	7	—	Phoenix, Ariz.	102	53	8	2
Dayton, Ohio	103	64	4	1	Pueblo, Colo.	18	15	—	1
Detroit, Mich.	361	210	9	12	Salt Lake City, Utah	49	35	3	—
Evansville, Ind.	40	20	1	—	Tucson, Ariz.	62	29	3	—
Fort Wayne, Ind.	39	23	3	3	PACIFIC	1,290	745	72	27
Gary, Ind.	33	9	2	3	Berkeley, Calif.	16	11	—	1
Grand Rapids, Mich.	77	52	2	9	Fresno, Calif.	48	27	1	—
Indianapolis, Ind.	107	63	5	—	Glendale, Calif.	19	12	—	—
Madison, Wis.	31	20	—	3	Honolulu, Hawaii	45	18	2	—
Milwaukee, Wis.	144	104	1	2	Long Beach, Calif.	80	48	—	1
Peoria, Ill.	41	23	2	—	Los Angeles, Calif.	279	166	12	6
Rockford, Ill.	40	26	2	6	Oakland, Calif.	68	43	3	1
South Bend, Ind.	44	30	3	2	Pasadena, Calif.	21	16	—	—
Toledo, Ohio	103	69	—	—	Portland, Oreg.	99	63	4	—
Youngstown, Ohio	71	54	4	—	Sacramento, Calif.	56	33	2	1
WEST NORTH CENTRAL	681	411	30	24	San Diego, Calif.	105	62	7	2
Des Moines, Iowa	62	39	1	—	San Francisco, Calif.	174	106	11	4
Duluth, Minn.	19	13	1	—	San Jose, Calif.	47	29	1	—
Kansas City, Kans.	27	13	2	—	Seattle, Wash.	131	55	22	2
Kansas City, Mo.	125	72	8	1	Spokane, Wash.	70	39	6	5
Lincoln, Nebr.	16	11	—	1	Tacoma, Wash.	32	17	1	4
Minneapolis, Minn.	93	68	3	6	Total	11,244	6,624	427	450
Omaha, Nebr.	57	31	8	—	Expected Number	12,063	6,815	546	391
St. Louis, Mo.	204	110	7	9	Cumulative Total (includes reported corrections for previous weeks)	464,831	273,546	17,321	18,967
St. Paul, Minn.	43	29	—	3					
Wichita, Kans.	35	25	—	4					

†Delayed report for week ending Sept. 1, 1973

\*Estimate based on average percent of divisional total

## HYPERSENSITIVITY ANGIITIS DUE TO TRICHINELLOSIS — Maryland

On June 27, 1973, a 29-year-old man was admitted to a hospital in Baltimore, Maryland, with symptoms compatible with a cerebrovascular accident. His history included fever, periorbital edema, and weakness of the left side of his body but no associated headaches, visual symptoms, or sensory disturbances. He had no history of previous similar episodes or of transient visual, sensory, or motor disturbances. He was treated with ampicillin 1 week prior to admission to the hospital because of the febrile symptoms.

Physical examination on admission revealed splinter hemorrhages beneath all fingernails but not under the toenails. There was marked weakness of the left trapezius muscle and mild weakness of the left sternocleidomastoid muscle. The patient had left hemiparesis with greater involvement of the lower than upper extremity and was unable to move his toes. Oppenheim's sign was present on the left as were Babinski and Chaddock reflexes. Sensation was normal.

Laboratory findings included a white blood cell count of 11,200 with 52% eosinophils. The eosinophils remained elevated during the patient's hospitalization. The bentonite flocculation test for trichinosis was strongly positive (1:80). A brain scan was normal. The initial electroencephalogram obtained on the day of admission revealed a mild excess of

fast activity which was felt to be possibly due to the administration of phenothiazine; however, a repeat tracing 13 days later revealed a dysrhythmic background. There was no consistent focal disturbance. The patient was treated with thia-bendazole, prednisone, and a tranquilizer.

At the time of discharge, the patient had mild weakness of the left upper extremity. Although he also retained weakness of the left lower extremity, he was able to walk without assistance.

The patient's condition was diagnosed as a cerebrovascular accident secondary to angiitis associated with a hypersensitivity reaction to *Trichinella spiralis* infection.

Epidemiologic investigation revealed that the patient often eats raw hamburger which he purchases from several markets in Baltimore County. Further investigation is underway; adulterated ground beef is the suspect vehicle.

(Reported by Solomon Robbins, M.D., private physician, Baltimore; Michael L. Levin, M.D., Head, Division of Infectious Diseases, Sinai Hospital; Ron Nelson, R.S., Sanitarian, Division of Food Control, John D. Stafford, M.D., Chief, Division of Communicable Diseases, Maryland Department of Health and Mental Hygiene.)

## CURRENT TRENDS

## PRIMARY AND SECONDARY SYPHILIS, UNITED STATES, JULY 1973

In FY 1973\*, an estimated 25,130 primary and secondary syphilis cases were reported in the United States, an increase of 4.2% over the number reported in FY 1972. Cases reported in the period April — June 1973 were up only 0.5% over the number reported in the same period a year ago; how-

ever, primary and secondary syphilis cases increased 3.8% in July 1973 compared with July 1972.

(Reported by the Venereal Disease Branch, Bureau of State Services, CDC.)

\*FY is 12-month period ending June 30.

## CASES OF PRIMARY AND SECONDARY SYPHILIS: By Reporting Area July 1973 and July 1972 — Provisional Data

Reporting Area	July		Cumulative Jan. — July		Reporting Area	July		Cumulative Jan. — July	
	1973	1972	1973	1972		1973	1972	1973	1972
NEW ENGLAND .....	97	78	668	515	EAST SOUTH CENTRAL .....	64	119	782	806
Maine .....	2	4	14	18	Kentucky .....	22	27	218	158
New Hampshire .....	—	—	5	5	Tennessee .....	26	40	249	295
Vermont .....	1	—	13	11	Alabama .....	6	25	101	116
Massachusetts .....	71	42	459	285	Mississippi .....	10	27	214	237
Rhode Island .....	3	5	14	26	WEST SOUTH CENTRAL .....	242	234	1,580	1,771
Connecticut .....	20	27	163	170	Arkansas .....	15	16	92	129
MIDDLE ATLANTIC .....	509	448	3,349	3,353	Louisiana .....	74	66	489	512
Upstate New York .....	34	33	233	248	Oklahoma .....	8	6	104	58
New York City .....	322	308	2,092	2,342	Texas .....	145	146	895	1,072
Pa. (Excl. Phila.) .....	17	23	144	107	MOUNTAIN .....	24	40	325	290
Philadelphia .....	50	23	283	179	Montana .....	—	1	1	5
New Jersey .....	86	61	597	477	Idaho .....	1	—	7	3
EAST NORTH CENTRAL .....	157	204	1,314	1,487	Wyoming .....	1	1	3	9
Ohio .....	23	26	166	191	Colorado .....	7	12	121	42
Indiana .....	12	17	176	116	New Mexico .....	2	5	41	52
Downstate Illinois .....	8	17	105	93	Arizona .....	7	14	99	118
Chicago .....	71	76	526	597	Utah .....	—	2	8	15
Michigan .....	36	65	293	466	Nevada .....	6	5	45	36
Wisconsin .....	7	3	48	24	PACIFIC .....	328	308	2,498	2,048
WEST NORTH CENTRAL .....	32	27	183	163	Washington .....	12	10	90	73
Minnesota .....	8	7	62	26	Oregon .....	6	3	30	26
Iowa .....	8	6	30	28	California .....	304	291	2,331	1,922
Missouri .....	12	8	68	72	Alaska .....	1	3	10	12
North Dakota .....	—	—	1	—	Hawaii .....	5	1	37	15
South Dakota .....	1	—	3	1	U.S. TOTAL .....	2,014	1,940	14,674	14,035
Nebraska .....	3	3	5	14	TERRITORIES .....	64	77	474	506
Kansas .....	—	3	14	22	Puerto Rico .....	64	74	456	458
SOUTH ATLANTIC .....	561	482	3,975	3,602	Virgin Islands .....	—	3	18	48
Delaware .....	6	7	59	39					
Maryland .....	65	78	484	556					
District of Columbia .....	60	68	451	468					
Virginia .....	53	30	427	247					
West Virginia .....	3	2	11	15					
North Carolina .....	46	33	369	310					
South Carolina .....	60	33	383	279					
Georgia .....	120	104	731	769					
Florida .....	148	127	1,060	919					

Note: Cumulative Totals include revised and delayed reports through previous months.

# SURVEILLANCE SUMMARY

## EASTERN EQUINE ENCEPHALOMYELITIS – New Hampshire

On August 18, 1973, a private veterinarian in Rockingham County, New Hampshire, reported an outbreak of suspect eastern equine encephalomyelitis (EEE) to the local health officer in Exeter; the veterinarian noted that 18 horses had been infected with an acute central nervous system disease and had died within the previous week. The health officer promptly contacted the Division of Public Health, New Hampshire State Department of Health and Welfare, and the State Veterinarian subsequently requested all veterinarians in the state who treated large animals to report any suspect EEE cases on a daily basis. In addition, mosquito surveillance activities were initiated by the Entomology Department of the University of New Hampshire in Durham and included the capture and identification of mosquitoes and attempts at viral isolation to determine the activity of the virus in the vector.

Within 2 days a surveillance system designed to detect human encephalitis cases was also established with the cooperation of 13 hospitals in Rockingham and 4 surrounding counties. Each hospital agreed to report daily any confirmed or suspect cases of aseptic meningitis or encephalitis to the State Division of Public Health. Date of onset and place of residence were listed for each patient, and proper stool, cerebrospinal fluid, throat swab, and serologic specimens were to be collected from each one. Final confirmation of suspect cases was made by a physician in the State Division of Public Health. Because of Rockingham County's proximity to Maine and Massachusetts, their state health departments were asked to aid New Hampshire by reporting any suspect EEE activity.

No human cases of EEE have been confirmed; however, this surveillance system uncovered 18 cases of aseptic meningitis and 3 suspect human cases of encephalitis in the last 2 weeks of August, representing approximately 5 times the normal number of cases of these diseases reported for the area surveyed.

To date, 41 suspect and 2 confirmed EEE cases have been reported in horses.

(Reported by Daniel Burbank, D.V.M., private veterinarian, Rockingham County, New Hampshire; Thomas Whitney, M.D., Health Officer, Exeter; Thomas Fisher, Ph.D., Professor of Entomology, University of New Hampshire, Durham; Clarence Dearborn, D.V.M., State Veterinarian, Vlasdas Kaupas, M.D., Director, Bureau of Communicable Disease Control, Hugh Wilkerson, M.D., Acting State Health Officer, Gerard Zeiller, Commissioner, New Hampshire State Department of Health and Welfare.)

### Erratum, Vol. 22, No. 30, p. 249

In the article "Human Bubonic Plague – Arizona," the following persons were inadvertently omitted from the credits: Staff of the Bacteriology Laboratory, St. Joseph's Hospital and Medical Center, Phoenix, Arizona. This laboratory isolated the *Yersinia pestis* organism and identified it by biochemical reactions before it was sent to the State Laboratory for confirmation by bacteriophage typing.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to: Center for Disease Control  
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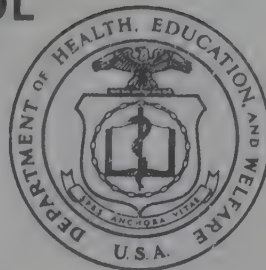
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# Morbidity and Mortality



Vol. 22, No. 38

WEEKLY  
REPORT

For  
Week Ending  
September 22, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE  
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## EPIDEMIOLOGIC NOTES AND REPORTS PROBABLE BOTULISM - Washington

On August 5, 1973, an 18-year-old man in Wenatchee, Washington, developed dizziness and the following day had the onset of diplopia, dysphagia, dysphonia, and weakness in both arms. These symptoms progressed, and he was admitted to a local hospital on August 7.

Physical examination revealed evidence of cranial nerve impairment and upper extremity weakness. A Tensilon\* test was negative. Spinal fluid protein was 53 mg%, and no cells were present. The patient's condition continued to deteriorate, and he was transferred to a hospital in Seattle on August 8.

On admission he denied a history of dry mouth, sore throat, nausea, vomiting, and paresthesias. On examination

\*Inclusion of trade names does not imply endorsement by the Public Health Service or the U.S. Department of Health, Education, and Welfare.

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he was drowsy but oriented. His pupils were in mid-position and reactive. Extraocular movements were decreased in all fields of gaze, and marked ptosis was present bilaterally. There was also evidence of impairment of cranial nerves VII and IX-XII. The patient had muscle weakness in both the arms and legs. Sensory examination was normal. Deep tendon reflexes were diminished in the arms but normal in the legs. The differential diagnosis at this time included atypical

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	38th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 38 WEEKS		
	September 22, 1973	September 23, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	165	188	231	3,205	2,649	2,871
Brucellosis	5	11	5	138	144	154
Chickenpox	292	368	---	145,473	114,628	---
Diphtheria	1	3	3	126	75	75
Encephalitis, primary:						
Arthropod-borne and unspecified	48	38	38	1,066	743	930
Encephalitis, post-infectious	1	4	4	222	221	283
Hepatitis, serum (Hepatitis B)	138	150	126	5,816	6,652	5,211
Hepatitis, infectious (Hepatitis A)	1,122	1,040	1,056	36,975	39,972	39,973
Malaria	7	14	71	181	704	2,089
Measles (rubeola)	90	138	156	24,320	27,079	27,079
Meningococcal infections, total	11	23	23	1,075	1,039	1,911
Civilian	11	21	21	1,051	997	1,720
Military	---	2	1	24	42	191
Mumps	387	420	612	55,828	57,323	76,747
Rubella (German measles)	87	135	236	26,118	21,019	44,131
Tetanus	3	8	4	64	90	90
Tuberculosis, new active	620	699	---	22,972	24,499	---
Tularemia	7	1	1	127	103	102
Typhoid fever	13	12	13	507	253	253
Typhus, tick-borne (Rky. Mt. spotted fever)	15	20	9	562	453	352
Venereal Diseases:						
Gonorrhea	18,665	18,161	---	595,982	538,788	---
Syphilis, primary and secondary	461	515	---	18,876	17,955	---
Rabies in animals	46	71	58	2,641	3,162	2,614

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total: Md.-1, Fla.-1	5
Botulism:	14	Paralytic: Md.-1	4
Congenital rubella syndrome: *	21	Psittacosis:	18
Leprosy: Tex.-1	91	Rabies in man:	---
Leptospirosis: Pa.-1	27	Trichinosis: Conn.-1	71
Plague:	2	Typhus, murine: Tex.-1	28

\* Delayed reports: Congenital rubella syndrome: Ariz.-2

## BOTULISM — Continued

Guillain-Barré syndrome and botulism. The patient was treated initially with gastric lavage and high enemas. Botulinal antitoxin was withheld pending the results of laboratory tests.

On August 9, a repeat lumbar puncture was performed; spinal fluid protein was 31 mg%, and 2 mononuclear cells were seen. Nerve conduction velocities were normal, and an electromyogram (EMG) failed to demonstrate facilitation of the muscle action potential during rapid repetitive nerve stimulation. Because of rapidly increasing respiratory difficulty the patient required mechanical ventilatory assistance; later that day a tracheostomy was performed.

Over the next several days, the patient's neurologic condition stabilized. Deep tendon reflexes were absent in the arms and legs. A repeat lumbar puncture was performed on August 22; spinal fluid protein was 23 mg%, and no cells were present. A subsequent EMG revealed decreased amplitude of the muscle action potential but again failed to demonstrate facilitation of the potential.

Serum and stool specimens obtained on the fourth day of illness were negative for botulinal toxin; however, culture of the stool specimen yielded *Clostridium botulinum*, type A. Repeat analyses of serum specimens obtained on August 16 and 31 and a stool specimen obtained on August 31 were negative for botulinal toxin.

Epidemiologic investigation revealed that the patient had eaten fish soup and salmon, both home-canned, several days prior to the onset of his illness. Multiple food specimens were analysed, and an unopened container of the home-canned salmon was positive for type A botulinal toxin.

(Reported by Robert Rankin, M.D., general practitioner, Wenatchee, Washington; David Gilbert, M.D., Intern, Jack

Miller, M.D., Neurology Resident, Robert Graebner, M.D., Chief Neurology Resident, Donald F. Farrell, M.D., Attending Neurologist, University of Washington Hospital, Seattle; Jean G. Spearman, R.N., M.N., Public Health Nurse Epidemiologist, Epidemiology Division, Seattle-King County Health Department; Clarence Hall, Head, Environmental Health Unit, Laboratory Section, Washington State Health Services Division; John Girard, R.S., Supervisor, Food Protection Section, Marshall Kremers, M.D., Acting State Epidemiologist, Washington State Department of Social and Health Services; the Food and Drug Administration; the Anaerobe Unit, Enterobacteriology Section, Bacteriology Branch, Bureau of Laboratories, CDC; and an EIS Officer.)

## Editorial Note

The initial diagnosis in this case was atypical descending Guillain-Barré syndrome, which was suggested by the decreased and later absent deep tendon reflexes, the slightly elevated spinal fluid protein, and the negative serum and fecal analyses for botulinal toxin. In addition, 1 of the EMG findings frequently associated with botulism, facilitation of the muscle action potential with rapid, repetitive nerve stimulation, was not observed in this case.

However, the isolation of *C. botulinum*, type A, from the patient's stool and the demonstration of type A toxin in uneaten food obtained from the patient's home constitute circumstantial evidence favoring the diagnosis of botulism. Atypical Guillain-Barré syndrome is the entity most often confused with botulism in cases reported to CDC (1).

## Reference

1. U.S. Department of Health, Education, and Welfare, Public Health Service: Botulism in the United States: Review of Cases 1899-1973 and Handbook for Epidemiologists, Clinicians, and Laboratory Workers. In press

### CURRENT TRENDS MEASLES RESOLUTION ADOPTED BY THE AMERICAN MEDICAL ASSOCIATION

At its annual convention held June 24-28, 1973, the American Medical Association House of Delegates adopted "Resolution 108—More Complete and More Prompt Reporting of Measles," which requests all physicians and others charged with the responsibility for reporting measles cases to report them *promptly, preferably by telephone*, to the local and state public health officials concerned. In addition, both public health officials and private practitioners are encouraged to intensify and expand their efforts to immunize those persons susceptible to the disease whenever second or successive generation measles cases are detected in the community.

According to the measure, prior to the development of an effective vaccine, the action following the reporting of measles cases usually failed to prevent the spread of the disease; continuing failure to report measles until second, third, or fourth generation cases appear, also allows rapid spread. Prompt reporting, the measure states, could and frequently has prevented many cases by developing public health immunization campaigns and increased immunization efforts by private physicians in the area of the outbreak.

(Reported by the Department of Environmental, Occupational, and Public Health, American Medical Association.)

### EPIDEMIOLOGIC NOTES AND REPORTS MEASLES — Maryland

On May 24, 1973, a private physician in Prince George's County, Maryland, reported 1 case of measles in an 8-year-old third-grade boy (Case 1) who resided in Prince George's County but attended an elementary school in Charles County. The physician based his diagnosis on characteristic clinical signs and symptoms and listed the onset date as May 14. He also stated that the boy had not received measles vaccine. Subsequently, the physician reported 2 additional cases: 1 in a 6-year-old girl (Case 2) with onset on May 28 who had

received further attenuated measles vaccine before she was 1 year of age and the other in a 10-month-old boy (Case 3) with no history of vaccination who became ill on May 29. Both children had been exposed to the index case in the physician's waiting room on May 15. A visit to the homes of these 3 children and to another elementary school which Case 2 attended revealed no new measles cases.

On June 20, a physician in Charles County reported 2  
(Continued on page 323)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING SEPTEMBER 22, 1973 AND SEPTEMBER 23, 1972 (38th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES .....	165	5	292	1	126	48	38	1	138	1,122	1,040
NEW ENGLAND .....	14	—	49	—	3	3	—	1	1	68	66
Maine*	—	—	—	—	—	—	—	—	—	—	1
New Hampshire *	1	—	1	—	—	—	—	1	—	8	4
Vermont .....	—	—	—	—	—	—	—	—	—	5	5
Massachusetts .....	6	—	29	—	1	2	—	—	—	39	38
Rhode Island .....	3	—	13	—	2	—	—	—	—	3	5
Connecticut .....	4	—	6	—	—	1	—	—	1	13	13
MIDDLE ATLANTIC .....	26	—	14	—	—	11	12	—	23	149	206
Upstate New York .....	2	—	1	—	—	2	5	—	4	59	43
New York City .....	2	—	13	—	—	—	—	—	7	21	42
New Jersey .....	19	—	NN	—	—	3	1	—	4	47	57
Pennsylvania .....	3	—	—	—	—	6	6	—	8	22	64
EAST NORTH CENTRAL .....	49	1	75	—	—	12	12	—	32	172	162
Ohio .....	9	1	12	—	—	5	2	—	7	19	32
Indiana .....	2	—	4	—	—	—	—	—	—	16	15
Illinois .....	6	—	—	—	—	4	5	—	7	37	26
Michigan .....	29	—	22	—	—	3	2	—	16	87	83
Wisconsin .....	3	—	37	—	—	—	3	—	2	13	6
WEST NORTH CENTRAL .....	5	—	25	—	7	—	1	—	9	50	43
Minnesota .....	3	—	4	—	—	—	1	—	2	8	10
Iowa .....	—	—	12	—	—	—	—	—	3	5	10
Missouri .....	2	—	—	—	—	—	—	—	2	16	17
North Dakota .....	—	—	7	—	—	—	—	—	—	—	1
South Dakota .....	—	—	—	—	7	—	—	—	—	1	1
Nebraska .....	—	—	2	—	—	—	—	—	1	—	—
Kansas .....	—	—	—	—	—	—	—	—	1	20	4
SOUTH ATLANTIC .....	23	1	21	—	—	5	3	—	14	222	146
Delaware .....	—	—	—	—	—	—	—	—	—	3	3
Maryland .....	4	—	2	—	—	—	—	—	—	13	11
District of Columbia .....	2	—	—	—	—	—	—	—	3	—	1
Virginia .....	6	1	—	—	—	1	—	—	1	35	9
West Virginia .....	2	—	19	—	—	—	2	—	—	—	6
North Carolina .....	7	—	NN	—	—	2	1	—	6	37	28
South Carolina .....	—	—	—	—	—	—	—	—	—	21	7
Georgia .....	—	—	—	—	—	—	—	—	—	9	42
Florida .....	2	—	—	—	—	2	—	—	4	104	39
EAST SOUTH CENTRAL .....	15	—	4	—	—	2	4	—	7	88	88
Kentucky .....	3	—	2	—	—	—	—	—	2	23	30
Tennessee .....	7	—	NN	—	—	—	2	—	1	39	40
Alabama .....	3	—	1	—	—	—	2	—	2	20	12
Mississippi .....	2	—	1	—	—	2	—	—	2	6	6
WEST SOUTH CENTRAL .....	15	3	18	—	14	5	4	—	13	142	101
Arkansas*	—	—	2	—	—	—	—	—	1	2	5
Louisiana *	8	—	NN	—	—	—	—	—	5	19	14
Oklahoma .....	3	—	2	—	—	2	1	—	3	29	11
Texas .....	4	3	14	—	14	3	3	—	4	92	71
MOUNTAIN .....	—	—	28	—	20	1	—	—	—	49	75
Montana .....	—	—	8	—	—	—	—	—	—	3	8
Idaho .....	—	—	—	—	—	—	—	—	—	1	3
Wyoming .....	—	—	1	—	—	—	—	—	—	—	1
Colorado .....	—	—	15	—	—	1	—	—	—	13	44
New Mexico .....	—	—	4	—	6	—	—	—	—	2	1
Arizona*	—	—	—	—	14	—	—	—	—	—	12
Utah .....	—	—	—	—	—	—	—	—	—	3	5
Nevada *	—	—	—	—	—	—	—	—	—	27	1
PACIFIC .....	18	—	58	1	82	9	2	—	39	182	153
Washington .....	1	—	40	1	74	2	—	—	5	28	17
Oregon .....	1	—	—	—	3	—	—	—	2	19	27
California *	16	—	—	—	3	7	2	—	31	123	101
Alaska .....	—	—	15	—	2	—	—	—	—	—	2
Hawaii .....	—	—	3	—	—	—	—	—	1	12	6
Guam*	—	—	—	—	—	—	—	—	—	—	1
Puerto Rico .....	—	—	1	—	—	—	—	—	—	11	10
Virgin Islands .....	—	—	—	—	—	—	—	—	—	—	—

\*Delayed reports: Aseptic meningitis: N. H. 1, Guam 1  
 Chickenpox: Guam 4  
 Diphtheria: Ariz. 1  
 Encephalitis, primary: N.H. 3, Calif. 2

Hepatitis B: Ark. 1, Ariz. 1, Nev. 3, Guam 1  
 Hepatitis A: Me. 6, N. H. 5, Ark. 8, La. delete 1,  
 Ariz. 18, Nev. 28, Guam 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING SEPTEMBER 22, 1973 AND SEPTEMBER 23, 1972 (38th WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	7	181	90	24,320	27,079	11	1,075	1,039	387	55,828	87	26,118
NEW ENGLAND .....	1	15	4	7,379	3,169	—	46	43	41	2,929	2	3,637
Maine *	—	—	—	65	244	—	1	3	—	332	—	68
New Hampshire .....	—	—	—	857	260	—	6	3	—	191	—	375
Vermont .....	—	2	—	119	128	—	3	—	4	261	—	47
Massachusetts .....	—	6	2	3,930	716	—	12	21	17	858	1	2,045
Rhode Island .....	1	1	1	605	524	—	3	10	8	348	1	214
Connecticut .....	—	6	1	1,803	1,297	—	21	6	12	939	—	888
MIDDLE ATLANTIC .....	—	28	9	2,473	1,012	2	147	126	24	7,254	3	4,193
Upstate New York .....	—	14	—	802	127	1	52	32	NN	NN	—	422
New York City .....	—	2	4	903	341	—	29	38	18	4,557	—	470
New Jersey .....	—	5	5	416	486	1	35	24	1	1,500	2	3,007
Pennsylvania .....	—	7	—	352	58	—	31	32	5	1,197	1	294
EAST NORTH CENTRAL .....	1	23	39	8,537	11,057	—	141	150	65	14,264	33	5,995
Ohio .....	—	4	1	283	251	—	57	61	5	2,680	—	687
Indiana .....	—	3	12	644	1,243	—	4	11	7	1,195	4	944
Illinois .....	1	12	8	2,069	4,111	—	24	32	8	2,406	4	963
Michigan .....	—	4	11	4,375	1,990	—	41	40	20	3,933	14	1,841
Wisconsin .....	—	—	7	1,166	3,462	—	15	6	25	4,050	11	1,560
WEST NORTH CENTRAL .....	—	7	2	441	946	—	83	74	40	4,678	2	1,211
Minnesota .....	—	1	2	21	21	—	8	23	—	81	—	221
Iowa .....	—	1	—	277	659	—	19	4	25	2,854	1	191
Missouri .....	—	1	—	52	163	—	32	20	13	687	1	265
North Dakota .....	—	1	—	58	52	—	3	—	—	66	—	276
South Dakota .....	—	—	—	—	6	—	4	2	—	19	—	23
Nebraska .....	—	1	—	6	18	—	10	9	2	135	—	140
Kansas .....	—	2	—	27	27	—	7	16	—	836	—	95
SOUTH ATLANTIC .....	2	30	8	1,223	2,168	3	182	237	33	6,589	17	2,131
Delaware .....	—	—	—	8	50	—	—	1	—	264	1	14
Maryland .....	—	3	—	12	15	1	24	35	3	634	—	10
District of Columbia .....	—	1	—	5	2	—	4	10	7	123	—	3
Virginia .....	2	8	—	418	60	1	35	49	6	700	1	621
West Virginia *	—	—	3	213	278	—	4	8	—	2,248	13	308
North Carolina .....	—	7	—	4	34	1	39	29	NN	NN	—	202
South Carolina .....	—	1	1	60	216	—	12	20	—	354	2	86
Georgia .....	—	3	—	152	169	—	21	18	—	31	—	12
Florida .....	—	7	4	351	1,344	—	43	67	17	2,235	—	875
EAST SOUTH CENTRAL .....	—	9	6	606	1,044	3	97	79	60	4,616	3	1,315
Kentucky .....	—	4	2	371	523	1	34	25	32	1,360	—	394
Tennessee .....	—	—	—	165	192	—	39	28	26	2,141	3	529
Alabama .....	—	5	4	13	147	—	15	16	—	655	—	186
Mississippi .....	—	—	—	57	182	2	9	10	2	460	—	206
WEST SOUTH CENTRAL .....	1	10	10	688	1,485	—	166	125	39	3,764	7	1,451
Arkansas .....	—	—	—	69	13	—	13	9	1	356	—	112
Louisiana .....	—	2	—	84	85	—	39	37	—	85	—	99
Oklahoma .....	—	1	1	55	10	—	29	6	3	436	—	178
Texas .....	1	7	9	480	1,377	—	85	73	35	2,887	7	1,062
MOUNTAIN .....	—	9	3	727	1,857	1	32	22	11	2,466	2	2,383
Montana .....	—	1	—	17	16	1	7	4	5	238	—	502
Idaho .....	—	—	—	255	109	—	4	5	—	110	—	39
Wyoming .....	—	—	—	80	51	—	—	1	—	421	—	7
Colorado .....	—	2	—	105	525	—	11	5	5	455	1	1,545
New Mexico .....	—	2	3	124	122	—	3	3	1	966	1	193
Arizona *	—	4	—	17	878	—	3	1	—	140	—	19
Utah .....	—	—	—	128	155	—	2	2	—	128	—	75
Nevada .....	—	—	—	1	1	—	2	1	—	8	—	3
PACIFIC .....	2	50	9	2,246	4,341	2	181	183	74	9,268	18	3,802
Washington .....	—	3	1	1,014	977	1	20	16	27	1,438	5	668
Oregon .....	1	4	3	459	133	—	12	14	9	1,723	—	785
California .....	1	40	5	689	3,120	1	143	142	22	5,137	13	2,314
Alaska .....	—	2	—	65	13	—	6	8	13	707	—	9
Hawaii .....	—	1	—	19	98	—	—	3	3	263	—	26
Guam *	—	—	—	50	15	—	—	11	—	20	—	13
Puerto Rico .....	—	—	17	1,830	684	—	8	4	3	702	3	30
Virgin Islands .....	—	—	—	1	3	—	—	2	—	24	—	2

\*Delayed reports: Measles: W. Va. 3, Guam 1  
Meningococcal infections: W. Va. 1  
Mumps: Me. 2, W. Va. 3, Guam 1  
Rubella: W. Va. delete 2, Ariz. 1, Guam 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING SEPTEMBER 22, 1973 AND SEPTEMBER 23, 1972 (38th WEEK) – Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES . . . . .	64	620	22,972	127	13	507	15	562	18,665	461	46	2,641
NEW ENGLAND . . . . .	2	38	837	—	2	13	1	2	526	8	—	101
Maine . . . . .	—	1	68	—	—	—	—	—	41	—	—	56
New Hampshire . . . . .	—	1	44	—	—	—	—	—	23	—	—	35
Vermont . . . . .	—	1	24	—	—	—	—	—	14	—	—	3
Massachusetts . . . . .	—	29	448	—	2	13	—	1	263	6	—	6
Rhode Island . . . . .	1	3	70	—	—	—	—	—	22	—	—	—
Connecticut . . . . .	1	3	183	—	—	—	1	1	163	2	—	1
MIDDLE ATLANTIC . . . . .	7	136	4,492	—	1	50	—	30	2,391	100	1	41
Upstate New York . . . . .	1	29	801	—	1	8	—	13	354	11	—	17
New York City . . . . .	3	35	1,672	—	—	18	—	4	1,458	51	—	—
New Jersey . . . . .	2	21	778	—	—	15	—	5	306	20	—	2
Pennsylvania . . . . .	1	51	1,241	—	—	9	—	8	273	18	1	22
EAST NORTH CENTRAL . . . . .	11	87	3,490	3	2	35	—	19	2,978	31	8	261
Ohio . . . . .	3	21	1,042	—	1	15	—	14	1,379	9	—	32
Indiana . . . . .	2	20	468	—	—	—	—	—	271	8	—	51
Illinois . . . . .	3	29	1,039	1	1	8	—	5	246	8	2	67
Michigan . . . . .	1	17	864	2	—	10	—	—	845	6	—	7
Wisconsin . . . . .	2	—	77	—	—	2	—	—	237	—	6	104
WEST NORTH CENTRAL . . . . .	6	26	959	14	2	23	2	20	1,151	22	13	833
Minnesota . . . . .	—	6	117	—	—	4	—	—	348	—	7	304
Iowa . . . . .	—	3	96	—	—	—	—	7	209	3	2	170
Missouri . . . . .	5	6	445	13	—	12	—	7	270	18	1	80
North Dakota . . . . .	1	2	34	—	—	—	—	—	27	—	3	133
South Dakota . . . . .	—	1	70	—	—	1	—	—	51	1	—	77
Nebraska . . . . .	—	3	67	—	—	1	—	2	112	—	—	3
Kansas . . . . .	—	5	130	1	2	5	2	4	134	—	—	66
SOUTH ATLANTIC . . . . .	13	150	4,589	15	1	235	6	283	4,185	177	7	235
Delaware . . . . .	—	3	75	—	—	—	—	7	103	3	—	3
Maryland . . . . .	—	17	500	5	—	6	—	13	441	5	1	4
District of Columbia . . . . .	—	3	206	—	—	—	—	—	404	16	—	—
Virginia . . . . .	2	22	605	3	—	3	3	59	526	22	4	69
West Virginia . . . . .	—	6	219	—	—	2	—	4	70	—	—	22
North Carolina *. . . . .	—	30	753	2	—	5	2	127	367	16	—	5
South Carolina . . . . .	1	16	366	—	1	6	1	30	487	50	—	5
Georgia . . . . .	2	18	752	3	—	1	—	42	732	13	2	78
Florida . . . . .	8	35	1,113	2	—	212	—	1	1,055	52	—	39
EAST SOUTH CENTRAL . . . . .	7	34	2,023	10	2	37	4	97	1,128	25	2	364
Kentucky . . . . .	1	8	477	1	2	10	—	—	165	5	1	197
Tennessee . . . . .	4	15	624	7	—	11	3	48	532	11	—	126
Alabama . . . . .	2	9	541	—	—	10	—	17	173	—	1	40
Mississippi . . . . .	—	2	381	2	—	6	1	32	258	9	—	1
WEST SOUTH CENTRAL . . . . .	10	76	2,355	81	—	21	2	95	2,960	54	7	462
Arkansas *. . . . .	—	14	291	58	—	3	—	17	159	2	2	101
Louisiana *. . . . .	3	15	363	—	—	6	—	—	478	13	1	37
Oklahoma . . . . .	4	6	200	17	—	2	2	70	239	2	2	139
Texas . . . . .	3	41	1,501	6	—	10	—	8	2,084	37	2	185
MOUNTAIN . . . . .	—	14	750	3	2	9	—	8	751	11	4	41
Montana*. . . . .	—	1	36	—	—	—	—	1	49	—	—	10
Idaho . . . . .	—	2	28	—	1	1	—	2	95	—	—	—
Wyoming . . . . .	—	1	21	—	—	1	—	1	13	1	—	—
Colorado . . . . .	—	6	136	—	1	2	—	1	292	1	—	—
New Mexico . . . . .	—	—	154	1	—	2	—	3	66	—	2	6
Arizona *. . . . .	—	—	291	—	—	3	—	—	178	5	1	22
Utah . . . . .	—	1	37	2	—	—	—	—	25	1	1	3
Nevada . . . . .	—	3	47	—	—	—	—	—	33	3	—	—
PACIFIC . . . . .	8	59	3,477	1	1	84	—	8	2,595	33	4	303
Washington . . . . .	2	—	276	—	—	7	—	5	252	5	—	6
Oregon . . . . .	1	5	186	—	—	2	—	2	218	—	—	7
California . . . . .	5	44	2,725	1	1	70	—	1	2,009	26	4	282
Alaska . . . . .	—	—	76	—	—	4	—	—	69	—	—	8
Hawaii . . . . .	—	10	214	—	—	1	—	—	47	2	—	—
Guam *. . . . .	—	—	35	—	—	—	—	—	—	—	—	—
Puerto Rico . . . . .	4	17	356	—	—	7	—	—	97	6	1	39
Virgin Islands . . . . .	—	—	2	—	—	—	—	—	8	1	—	—

\*Delayed reports: TB: N. C. delete 3  
Tularemia: Ark. 1  
Typhoid: Ariz. delete 1

Gonorrhea: La. delete 5, Guam 23  
Syphilis: Mont. delete 1, Guam 1  
Rabies: Ariz. 1

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING SEPTEMBER 22, 1973

Week No.

38

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	690	411	27	36	SOUTH ATLANTIC	1515	839	56	62
Boston, Mass.	201	108	11	7	Atlanta, Ga.	145	79	5	5
Bridgeport, Conn.	31	13	1	2	Baltimore, Md.	245	131	16	5
Cambridge, Mass.	22	17	1	4	Charlotte, N. C.	44	27	2	—
Fall River, Mass.	34	21	1	1	Jacksonville, Fla.	110	55	9	1
Hartford, Conn.	63	34	1	2	Miami, Fla.	110	46	3	6
Lowell, Mass.	28	20	2	2	Norfolk, Va.	41	19	2	3
Lynn, Mass.	22	16	—	1	Richmond, Va.	92	49	4	12
New Bedford, Mass.	31	22	—	1	Savannah, Ga.	31	11	4	2
New Haven, Conn.	62	39	4	2	St. Petersburg, Fla.	129	109	3	6
Providence, R. I.	53	32	2	6	Tampa, Fla.	79	44	4	7
Somerville, Mass.	10	6	—	—	Washington, D. C.	429	236	4	14
Springfield, Mass.	56	34	1	7	Wilmington, Del.	60	33	—	1
Waterbury, Conn.	25	17	2	—	EAST SOUTH CENTRAL	691	361	25	30
Worcester, Mass.	52	32	1	1	Birmingham, Ala.	110	66	3	1
MIDDLE ATLANTIC	3185	1937	99	166	Chattanooga, Tenn.	57	29	1	3
Albany, N. Y.	48	36	2	—	Knoxville, Tenn.	39	24	—	—
Allentown, Pa.	30	21	—	4	Louisville, Ky.	162	79	5	10
Buffalo, N. Y.	133	72	8	4	Memphis, Tenn.	125	69	5	4
Camden, N. J.	41	20	2	4	Mobile, Ala.	61	28	4	3
Elizabeth, N. J.	23	14	—	1	Montgomery, Ala.	48	24	2	5
Erie, Pa.	29	19	3	1	Nashville, Tenn.	89	42	5	4
Jersey City, N. J.	63	40	6	1	WEST SOUTH CENTRAL	1168	648	59	39
Newark, N. J.	71	27	8	2	Austin, Tex.	44	23	2	3
New York City, N. Y.†	1681	1047	37	92	Baton Rouge, La.	42	26	1	2
Paterson, N. J.	36	21	1	—	Corpus Christi, Tex.	29	15	4	1
Philadelphia, Pa.	489	286	15	30	Dallas, Tex.	159	95	5	2
Pittsburgh, Pa.	171	100	9	8	El Paso, Tex.	58	32	6	5
Reading, Pa.	33	22	—	5	Fort Worth, Tex.	71	42	2	3
Rochester, N. Y.	99	63	1	7	Houston, Tex.	187	89	7	4
Schenectady, N. Y.	20	15	—	—	Little Rock, Ark.	47	33	2	2
Scranton, Pa.	36	20	—	2	New Orleans, La.	149	76	7	4
Syracuse, N. Y.	79	46	7	—	Oklahoma City, Okla. *	82	49	4	2
Trenton, N. J.	38	24	—	4	San Antonio, Tex.	137	70	10	3
Utica, N. Y.	28	20	—	—	Shreveport, La.	109	68	4	4
Yonkers, N. Y.	37	24	—	1	Tulsa, Okla.	54	30	5	4
EAST NORTH CENTRAL	2450	1389	104	65	MOUNTAIN	528	288	40	11
Akron, Ohio	71	37	5	—	Albuquerque, N. Mex.	42	19	3	2
Canton, Ohio	39	26	—	3	Colorado Springs, Colo.	31	20	1	3
Chicago, Ill.	635	316	36	13	Denver, Colo.	144	76	27	3
Cincinnati, Ohio	200	113	9	3	Las Vegas, Nev.	21	9	2	—
Cleveland, Ohio	208	111	6	6	Ogden, Utah	22	16	—	1
Columbus, Ohio	92	60	4	6	Phoenix, Ariz.	123	59	7	—
Dayton, Ohio	103	68	4	4	Pueblo, Colo.	20	12	—	2
Detroit, Mich.	323	191	7	7	Salt Lake City, Utah	58	36	—	—
Evansville, Ind.	34	24	2	—	Tucson, Ariz.	67	41	—	—
Fort Wayne, Ind.	53	23	4	2	PACIFIC	1675	1004	57	45
Gary, Ind.	37	21	2	1	Berkeley, Calif.	12	7	1	1
Grand Rapids, Mich.	56	30	1	4	Fresno, Calif.	58	33	7	—
Indianapolis, Ind.	150	90	7	3	Glendale, Calif.	23	20	—	—
Madison, Wis.	40	23	2	4	Honolulu, Hawaii	51	25	6	1
Milwaukee, Wis.	123	86	2	1	Long Beach, Calif.	107	70	2	3
Peoria, Ill.	35	21	4	4	Los Angeles, Calif.	517	336	13	13
Rockford, Ill.	33	20	1	1	Oakland, Calif.	80	37	6	2
South Bend, Ind.	49	28	1	3	Pasadena, Calif.	33	21	—	—
Toledo, Ohio	106	62	2	—	Portland, Oreg.	149	78	4	2
Youngstown, Ohio	63	39	5	—	Sacramento, Calif.	66	33	4	1
WEST NORTH CENTRAL	774	489	36	20	San Diego, Calif.	143	79	9	1
Des Moines, Iowa	41	31	—	—	San Francisco, Calif.	155	96	2	4
Duluth, Minn.	23	15	1	2	San Jose, Calif.	48	27	1	—
Kansas City, Kans.	40	19	2	2	Seattle, Wash.	132	75	2	5
Kansas City, Mo.	130	90	8	1	Spokane, Wash.	56	41	—	9
Lincoln, Nebr.	16	10	2	1	Tacoma, Wash.	45	26	—	3
Minneapolis, Minn.	114	74	7	4	Total	12,676	7,366	503	474
Omaha, Nebr.	77	51	6	1	Expected Number	12,082	6,836	543	390
St. Louis, Mo.	189	108	3	3	Cumulative Total (includes reported corrections for previous weeks)	490,520	288,578	18,336	19,964
St. Paul, Minn.	65	46	4	1					
Wichita, Kans.	79	45	3	5					

†Delayed report for week ending Sept. 15, 1973

\*Estimate based on average percent of divisional total

# MEASLES — Continued

more cases of measles in third-grade students attending the first school. Case 4 was in an 8 1/2-year-old girl who had onset of symptoms on June 3. Case 5 was in a 9-year-old girl who became ill on June 6; she had received further attenuated measles vaccine when she was 6 months of age. Epidemiologic follow-up investigation identified 2 additional measles cases in contacts of the 9-year-old: a 6 1/2-year-old male student (Case 6) at the first school who became ill on June 6 and his 2-year-old sister (Case 7) who had onset of symptoms on June 19. Case 6 had received inactivated measles vaccine at approximately 18 months of age; Case 7 had never received measles vaccine.

The school health records of children in kindergarten through sixth grades at this elementary school were subse-

quently reviewed, and any child who did not have a history of measles vaccination was investigated; no new cases were uncovered. The school closed for summer vacation on June 8.

Further investigation revealed that on April 28 the index case and his family had taken a vacation trip to Florida and had visited Orlando, Daytona Beach, and Palatka, returning home on May 12. On May 14 the son became ill, and on May 15 he was diagnosed as having measles.

(Reported by Gilbert Fisher, Immunization Program Representative, George Pelletier, Public Health Advisor, Edmund Rodriquez, Prince George's County Health Department; A. O. Woodie, M.D., Charles County; Wayne R. Bobbitt, Jr., Public Health Advisor, John D. Stafford, M.D., State Epidemiologist, Maryland State Department of Health.)

## GASTROINTESTINAL DISEASE AT A PRIVATE CAMPSITE — Maryland

Between May 15 and 21, 1973, 52 of 66 school children who had been camping at a site in Carroll County, Maryland, became ill. Symptoms included vomiting (79%), headache (62%), fever (48%), diarrhea (44%), coryza (38%), cramps (29%), and sore throat (8%).

The times of onset of illness suggested a common-source exposure (Figure 1); however, histories of food consumption at the camp failed to implicate food as a vehicle. Cultures of stool specimens from affected campers were negative for *Salmonella*, *Shigella*, *Bacillus*, and strains of enteropathogenic *Escherichia coli* identifiable with commercially produced antisera. Samples of food and drinking water from the camp and of water from streams at the campsite were negative for the same organisms. Analysis of representative serum specimens failed to reveal any enteric virus titers.

A telephone and questionnaire survey of household contacts of the campers revealed a 14% attack rate of gastrointestinal illness among 205 contacts of ill children. None of 45 household contacts of campers who had not become ill reported illness. The epidemic curve of presumed secondary cases suggested that the illness had spread explosively among the families of contacts (Figure 1).

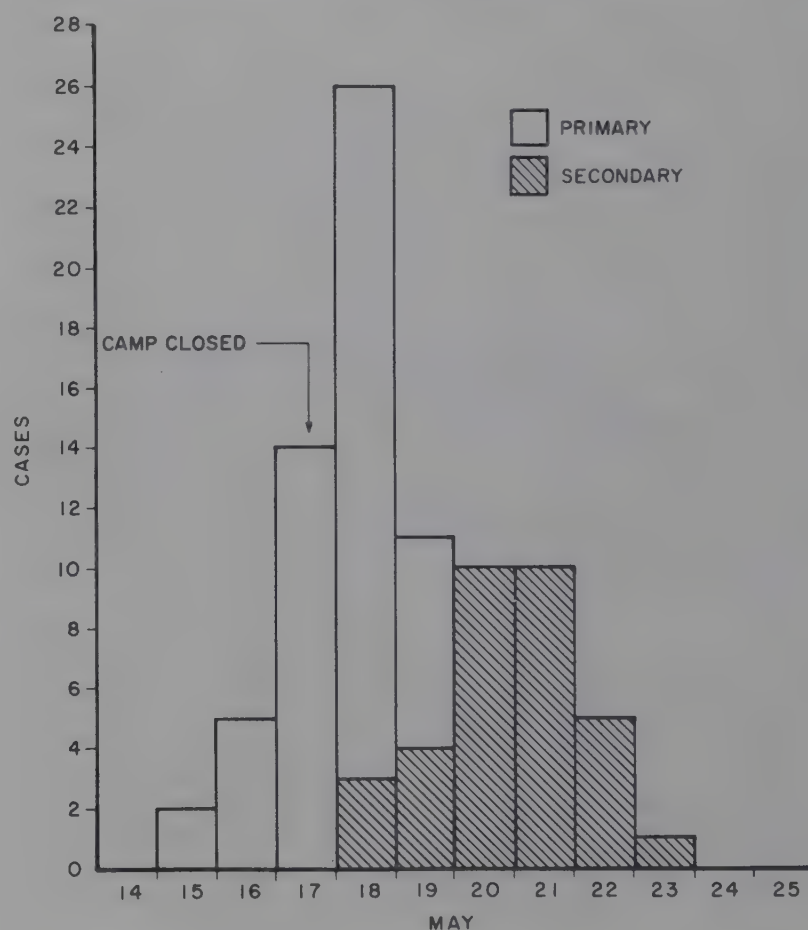
Four other outbreaks of gastrointestinal illness had been associated with the same campsite in the preceding 2 years. In all 5 instances several days of heavy rainfall at the campsite had preceded the outbreaks.

(Reported by James Naylor, R.S., Sanitarian, E. Maxine Fritz, R.N., Chief, Public Health Nursing, Willa Tommaney, M.D., Health Officer, Carroll County Health Department; Elizabeth Petran, Ph.D., Chief, Division of Microbiology, Mary Jo Garriss, R.S., Sanitarian, Ron Nelson, R.S., Sanitarian, John D. Stafford, M.D., Chief, Division of Communicable Diseases, Maryland Department of Health and Mental Hygiene; and an EIS Officer.)

### Editorial Note

The syndrome in this outbreak is compatible with a clinical entity variously known as winter vomiting disease, epidemic collapse, epidemic diarrhea and vomiting, or epidemic nausea and vomiting. The significance of heavy rainfall before each outbreak and the recurrence of the problem in a single geographical area is unknown. There has recently been increasing interest in the possibility that similar outbreaks may be due to 1 or more yet uncharacterized enteric

Figure 1  
CASES OF GASTROINTESTINAL DISEASE BY DATE OF ONSET  
CARROLL COUNTY (MD.) CAMPSITE — MAY 1973



viruses (1, 2, 3). Recognized bacterial pathogens that are not routinely looked for such as enteropathogenic *E. coli* not identifiable with commercial antisera may also be responsible for some outbreaks of gastrointestinal illness of obscure etiology.

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2. Blacklow NR, Dolin R, Fedson DS, *et al*: Acute infectious nonbacterial gastroenteritis: etiology and pathogenesis. *Ann Intern Med* 76: 993-1008, 1973
3. Kapikian AZ, Wyatt RG, Dolin R, *et al*: Visualization by immune electron microscopy of a 27-nm particle associated with acute infectious nonbacterial gastroenteritis. *J Virol* 10:1075-1081, 1972

## WAREHOUSE INSPECTION OF CANNED MUSHROOMS – United States

On September 25, 1973, the Food and Drug Administration (FDA) announced the initiation of a nationwide visual inspection of all commercially canned mushrooms in stock in warehouses. Laboratory tests will be conducted on all abnormal cans to find out if they are contaminated with botulinal toxin.

*(Reported by the Food and Drug Administration; and the Bacterial Diseases Branch, Bureau of Epidemiology, CDC.)*

## Editorial Note

This inspection has been undertaken because 5 com-

mercially canned mushroom products contaminated with botulinal toxin have been recalled so far this year (MMWR, Vol. 22, Nos. 7, 10, 13, 14, 29, and 37). Earlier this year, FDA evaluated all mushroom processing plants in the United States. FDA has worked with the companies to make necessary production improvements and has instituted new mandatory production safeguards.

As reported previously, only 1 case, nonfatal, has been associated with these products (MMWR, Vol. 22, No. 29).

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to: Center for Disease Control  
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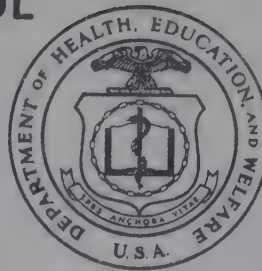
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# Morbidity and Mortality



Vol. 22, No. 39

WEEKLY  
REPORT

For  
Week Ending  
September 29, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE  
DATE OF RELEASE: OCTOBER 5, 1973 — ATLANTA, GEORGIA 30333

## EPIDEMIOLOGIC NOTES AND REPORTS HUMAN RABIES — Kentucky

On September 7, 1973, a 26-year-old man in Kentucky developed bilateral paresthesia and pain in his ears, headache, sore throat, and anorexia. These symptoms persisted and later were accompanied by fever, difficulty swallowing, confusion, and tremor. On September 10, he was admitted to the Clark County Hospital in Winchester, Kentucky, with a temperature of 105°F., nuchal rigidity, confusion, agitation, and spasmodic tremors.

Because of continuing deterioration in his condition, the patient was transferred to St. Joseph's Hospital in Lexington. Physical examination on admission revealed a temperature of 105°F., dysarthria, dysphagia, pharyngeal paralysis, and drooling. Stimulation of the patient precipitated spasms with spontaneous flexion of all extremities. A lumbar puncture revealed no marked abnormalities.

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On September 14, the patient had pharyngeal and laryngeal spasms, subsequent cyanosis, and suffered a respiratory arrest; he was resuscitated immediately.

The next day the patient's family offered the additional history that he had been bitten on the right ear by a bat in mid-August. The bat had escaped, and the patient had not sought medical care. On the basis of the epidemiologic and clinical data, the diagnosis of rabies was entertained.

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	39th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 39 WEEKS		
	September 29, 1973	September 30, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	202	160	194	3,409	2,809	3,107
Brucellosis	4	4	4	142	148	156
Chickenpox	272	348	---	145,749	114,976	---
Diphtheria	16	1	1	142	76	76
Encephalitis, primary:						
Arthropod-borne and unspecified	36	31	57	1,101	774	987
Encephalitis, post-infectious	6	3	3	228	224	284
Hepatitis, serum (Hepatitis B)	168	199	149	5,986	6,851	5,360
Hepatitis, infectious (Hepatitis A)	1,182	1,120	1,120	38,180	41,092	41,093
Malaria	5	11	44	186	715	2,184
Measles (rubeola)	76	131	153	24,397	27,210	27,210
Meningococcal infections, total	11	9	21	1,086	1,048	1,942
Civilian	11	8	21	1,062	1,005	1,749
Military	—	1	1	24	43	193
Mumps	428	340	631	56,258	57,663	77,510
Rubella (German measles)	84	404	243	26,205	21,423	44,362
Tetanus	3	2	4	68	92	92
Tuberculosis, new active	745	618	---	23,717	25,117	---
Tularemia	3	4	3	131	107	105
Typhoid fever	16	14	12	524	267	267
Typhus, tick-borne (Rky. Mt. spotted fever)	15	8	8	577	461	358
Venereal Diseases:						
Gonorrhea	18,118	19,417	---	614,100	558,205	---
Syphilis, primary and secondary	504	607	---	19,364	18,562	---
Rabies in animals	45	68	63	2,688	3,230	2,677

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total: Ind.-1	6
Botulism:	14	Paralytic:	4
Congenital rubella syndrome:	21	Psittacosis: *	19
Leprosy: Miss.-1, Tex.-1	93	Rabies in man:	—
Leptospirosis:	27	Trichinosis:	71
Plague:	2	Typhus, murine:	28

\* Delayed reports: Psittacosis: Iowa-1

# RABIES — Continued

Over the next few days, the patient lapsed into a coma. Neurologic examination revealed intermittent right lower motor neuron facial paralysis, generalized hyporeflexia, and response to only deep pain. No other focal abnormalities were present. Initially the patient was treated with diphenylhydantoin, diazepam, and chlorpromazine. Once the coma ensued, the sedatives were discontinued.

Proteinuria, hypothermia, and hypoxia subsequently developed. Despite intensive respiratory care which included ventilatory support by a volume-cycled respirator, antibiotics, postural drainage, use of bronchodilators, and vigorous suctioning, hypoxemia persisted. Serial chest X-rays revealed a progressive diffuse interstitial pattern. In spite of the use of continuous positive pressure breathing, pulmonary compliance and oxygenation deteriorated. On September 22, pneumothorax developed, and the patient had a repeat cardio-respiratory arrest and died.

The diagnosis of rabies was confirmed antemortem from corneal smears that were positive by the direct fluorescent antibody technique. Rabies virus was subsequently isolated from a sputum specimen obtained on September 20 and from brain tissue obtained postmortem.

Two bats captured near the patient's home and tested for rabies were negative. However, wildlife rabies, including bat rabies, is known to be endemic in this area of Kentucky. The last human rabies case was reported in 1961 in an elderly farmer who died from a fox bite.

(Reported by Vincent Taormino, M.D., Raymond Otero, Ph.D., Hospital Microbiologists, Karen Riley, R.N., Nurse Epidemiologist, St. Joseph's Hospital, Lexington; Philip Weiler, M.D., Administrator, Fayette County Health Department; Joseph Skaggs, D.V.M., State Epidemiologist, Bureau of Health Services, Calixto Hernandez, M.D., Kentucky Department of Human Resources; and the Viral Diseases Branch, Bureau of Epidemiology, CDC.)

## INTERNATIONAL NOTES YELLOW FEVER — the Americas, Africa

### The Americas

In 1972 Bolivia, Brazil, Colombia, Peru, Surinam, and Venezuela reported a total of 54 cases of jungle yellow fever (Table 1). In Brazil the majority of cases occurred in the south-central part of the State of Goias in a region free from *Aedes aegypti*. Two hundred thousand people living in this zone were vaccinated. Venezuela reported the largest number of cases (22) in 1972, although it had had none since 1966. A recrudescence of jungle yellow fever occurred in June and July, mainly in the States of Barinas and Portuguesa in the western part of the country. There appear to be no *A. aegypti* in this region at the moment. The number of cases reported in the other 4 countries corresponds to the usual endemic prevalence, but it should be noted that in Surinam, where no cases had been reported between 1950 and 1967, 1 case occurred each year in 1968, 1969, and 1972.

The status of the *A. aegypti* eradication campaign in the Americas is much the same as in 1971. By 1960 the campaign, which began in 1947, had resulted in the eradication of *A. aegypti* from 80% of the area formerly infested (nearly 12 million km<sup>2</sup>). Since 1964 some countries have relaxed their efforts, and this year the area free from *A. aegypti* is down to 73%.

The World Health Organization is collaborating with the governments of Brazil and Colombia in the maintenance of 2 reference centers for histopathologic diagnosis of yellow fever. Each of these countries also has an institute for the production of 17D yellow fever vaccine.

### Africa

Although no epidemic of yellow fever was observed in Africa in 1972, there is now no doubt that cases of jungle yellow fever occur more frequently than they are diagnosed. The risk of their initiating an epidemic is fairly large since *A. aegypti* abound in many regions and in many towns.

Two cases of jungle yellow fever were diagnosed in Cameroon, 1 in the western region at Banso (Kumba) in November 1972 and the other in the southeast at Ayos in December 1972. A fatal case had already been reported in

the latter locality in 1970. The first case in 1972 was in an adult aged 40, the second in a 9-year-old child. Both had been hospitalized for jaundice. The diagnosis was confirmed in both cases by histopathologic examination. Four cases of jungle yellow fever were also detected in Ghana (Table 2).

Table 1  
Reported Jungle Yellow Fever Cases and Deaths  
South America — 1971-1972

Country	1971		1972	
	Cases	Deaths	Cases	Deaths
Bolivia	8	5	9	0
Brazil	11	9	12	7
Colombia	9	7	3	3
Peru	0	0	7	7
Surinam	0	0	1	1
Venezuela	0	0	22	22
Total	28	21	54	40

Table 2  
Reported Yellow Fever Cases and Deaths  
Africa — 1971-1972

Country	1971		1972	
	Cases	Deaths	Cases	Deaths
Angola	65*	42	0	0
Cameroon	0	0	2	2
Ghana	0	0	4	4
Zaire	2	2	0	0
Total	67	44	6	6

\* Includes suspected cases

(Reported by the World Health Organization: Weekly Epidemiological Record, Vol. 48, No. 35, August 31, 1973.)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING SEPTEMBER 29, 1973 AND SEPTEMBER 30, 1972 (39th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
	1973	1973	1973	1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES .....	202	4	272	16	142	36	31	6	168	1,182	1,120
NEW ENGLAND .....	11	—	49	—	3	1	4	—	3	58	87
Maine *	—	—	—	—	—	—	—	—	—	—	13
New Hampshire *	—	—	13	—	—	—	—	—	1	6	10
Vermont .....	—	—	—	—	—	—	—	—	—	6	2
Massachusetts .....	7	—	22	—	1	—	2	—	—	31	33
Rhode Island .....	1	—	2	—	2	—	—	—	1	2	14
Connecticut .....	3	—	12	—	—	1	2	—	1	13	15
MIDDLE ATLANTIC .....	35	—	6	—	—	6	1	—	29	137	205
Upstate New York .....	12	—	—	—	—	4	1	—	3	37	55
New York City .....	2	—	6	—	—	2	—	—	6	33	32
New Jersey .....	13	—	NN	—	—	—	—	—	14	37	60
Pennsylvania *	8	—	—	—	—	—	—	—	6	30	58
EAST NORTH CENTRAL .....	28	—	74	—	—	10	7	1	19	126	204
Ohio .....	5	—	2	—	—	6	3	—	5	22	40
Indiana *	—	—	20	—	—	—	—	—	—	6	10
Illinois .....	4	—	—	—	—	1	1	1	7	44	67
Michigan .....	17	—	8	—	—	3	2	—	6	46	82
Wisconsin .....	2	—	44	—	—	—	1	—	1	8	5
WEST NORTH CENTRAL .....	4	—	33	—	7	2	9	2	4	54	20
Minnesota .....	2	—	—	—	—	—	5	—	—	3	2
Iowa .....	—	—	26	—	—	1	—	2	—	1	2
Missouri .....	—	—	—	—	—	—	—	—	4	15	7
North Dakota .....	—	—	6	—	—	—	—	—	—	4	—
South Dakota .....	—	—	—	—	7	—	—	—	—	19	1
Nebraska .....	—	—	1	—	—	—	—	—	—	—	2
Kansas .....	2	—	—	—	—	1	4	—	—	12	6
SOUTH ATLANTIC .....	28	1	35	—	—	3	1	—	20	224	193
Delaware .....	—	—	—	—	—	—	—	—	—	5	6
Maryland .....	3	—	—	—	—	—	—	—	5	2	28
District of Columbia .....	—	—	2	—	—	—	—	—	2	3	2
Virginia .....	8	1	—	—	—	2	—	—	2	14	18
West Virginia .....	—	—	29	—	—	—	—	—	—	5	7
North Carolina .....	11	—	NN	—	—	—	—	—	2	20	33
South Carolina .....	2	—	4	—	—	—	—	—	1	18	8
Georgia .....	—	—	—	—	—	1	—	—	—	22	16
Florida .....	4	—	—	—	—	—	1	—	8	135	75
EAST SOUTH CENTRAL .....	35	1	1	1	1	3	1	—	5	88	61
Kentucky .....	—	—	1	—	—	—	—	—	—	16	22
Tennessee .....	31	—	NN	—	—	1	—	—	3	59	24
Alabama .....	3	—	—	1	1	—	1	—	—	6	11
Mississippi .....	1	1	—	—	—	2	—	—	2	7	4
WEST SOUTH CENTRAL .....	12	1	16	—	14	5	2	—	5	169	87
Arkansas *	—	—	—	—	—	—	—	—	—	2	2
Louisiana .....	1	—	NN	—	—	—	2	—	4	21	15
Oklahoma .....	—	—	2	—	—	2	—	—	—	15	17
Texas .....	11	1	14	—	14	3	—	—	1	131	53
MOUNTAIN .....	—	—	9	14	34	—	1	—	1	52	50
Montana .....	—	—	3	—	—	—	—	—	—	3	1
Idaho .....	—	—	—	—	—	—	—	—	1	4	5
Wyoming .....	—	—	—	—	—	—	—	—	—	8	2
Colorado .....	—	—	2	—	—	—	—	—	—	7	21
New Mexico .....	—	—	4	14	20	—	1	—	—	24	1
Arizona *	—	—	—	—	14	—	—	—	—	1	9
Utah .....	—	—	—	—	—	—	—	—	—	5	5
Nevada .....	—	—	—	—	—	—	—	—	—	—	6
PACIFIC .....	49	1	49	1	83	6	5	3	82	274	213
Washington .....	6	—	45	1	75	—	—	—	2	23	15
Oregon .....	1	—	—	—	3	—	1	—	5	21	29
California .....	40	1	—	—	3	6	4	3	74	207	168
Alaska .....	1	—	—	—	2	—	—	—	—	18	1
Hawaii .....	1	—	4	—	—	—	—	—	1	5	—
Guam .....	—	—	—	—	—	—	—	—	—	—	1
Puerto Rico .....	—	—	3	—	—	—	—	—	2	26	27
Virgin Islands .....	—	—	—	—	—	—	—	—	—	—	—

\* Delayed reports: Aseptic meningitis: N.H. 2  
 Chickenpox: N.H. 4  
 Encephalitis, primary: Pa. delete 1

Hepatitis B: Ariz. 2  
 Hepatitis A: Me. 2, Ind. delete 2,  
 Ark. 7, Ariz. 16

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING SEPTEMBER 29, 1973 AND SEPTEMBER 30, 1972 (39th WEEK) - Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	5	186	76	24,397	27,210	11	1,086	1,048	428	56,258	84	26,205
NEW ENGLAND .....	-	15	21	7,401	3,195	-	46	44	27	2,958	6	3,646
Maine* .....	-	-	1	67	244	-	1	4	-	333	-	69
New Hampshire* .....	-	-	-	857	280	-	6	3	2	194	-	377
Vermont .....	-	2	-	119	128	-	3	-	-	261	-	47
Massachusetts .....	-	6	19	3,949	721	-	12	21	11	869	3	2,048
Rhode Island .....	-	1	-	605	524	-	3	10	5	353	1	215
Connecticut .....	-	6	1	1,804	1,298	-	21	6	9	948	2	890
MIDDLE ATLANTIC .....	1	29	18	2,491	1,023	1	148	127	31	7,285	5	4,198
Upstate New York .....	1	15	1	803	127	-	52	32	NN	NN	3	425
New York City .....	-	2	8	911	349	-	29	38	22	4,579	1	471
New Jersey .....	-	5	5	421	487	1	36	24	6	1,506	1	3,008
Pennsylvania .....	-	7	4	356	60	-	31	33	3	1,200	-	294
EAST NORTH CENTRAL .....	-	23	17	8,554	11,087	-	141	150	111	14,375	21	6,016
Ohio .....	-	4	1	284	251	-	57	61	8	2,688	1	688
Indiana .....	-	3	-	644	1,245	-	4	11	21	1,216	3	947
Illinois .....	-	12	3	2,072	4,123	-	24	32	18	2,424	1	964
Michigan .....	-	4	3	4,378	1,993	-	41	40	19	3,952	8	1,849
Wisconsin .....	-	-	10	1,176	3,475	-	15	6	45	4,095	8	1,568
WEST NORTH CENTRAL .....	-	7	1	442	955	1	84	74	42	4,720	2	1,213
Minnesota .....	-	1	-	21	21	-	8	23	1	82	-	221
Iowa .....	-	1	-	277	666	-	19	4	28	2,882	-	191
Missouri .....	-	1	1	53	164	-	32	20	-	687	1	266
North Dakota .....	-	1	-	58	52	-	3	-	-	66	-	276
South Dakota .....	-	-	-	-	7	-	4	2	-	19	-	23
Nebraska .....	-	1	-	6	18	-	10	9	10	145	1	141
Kansas .....	-	2	-	27	27	1	8	16	3	839	-	95
SOUTH ATLANTIC .....	1	31	5	1,228	2,172	4	186	238	38	6,627	6	2,137
Delaware .....	-	-	-	8	51	-	-	1	2	266	-	14
Maryland .....	1	4	-	12	15	1	25	36	1	635	-	10
District of Columbia .....	-	1	1	6	2	-	4	10	5	128	-	3
Virginia .....	-	8	1	419	60	1	36	49	4	704	1	622
West Virginia .....	-	-	1	214	278	1	5	8	6	2,254	3	311
North Carolina .....	-	7	-	4	34	-	39	29	NN	NN	-	202
South Carolina .....	-	1	-	60	216	-	12	20	1	355	-	86
Georgia .....	-	3	-	152	169	1	22	18	-	31	-	12
Florida .....	-	7	2	353	1,347	-	43	67	19	2,254	2	877
EAST SOUTH CENTRAL .....	-	9	1	607	1,049	2	99	81	33	4,649	7	1,322
Kentucky .....	-	4	1	372	523	-	34	26	5	1,365	1	395
Tennessee .....	-	-	-	165	193	1	40	28	27	2,168	5	534
Alabama .....	-	5	-	13	149	-	15	16	-	655	-	186
Mississippi .....	-	-	-	57	184	1	10	11	1	461	1	207
WEST SOUTH CENTRAL .....	-	10	3	691	1,501	1	167	127	38	3,802	2	1,453
Arkansas .....	-	-	-	69	13	-	13	9	2	358	-	112
Louisiana .....	-	2	-	84	87	1	40	39	-	85	-	99
Oklahoma .....	-	1	-	55	10	-	29	6	3	439	-	178
Texas .....	-	7	3	483	1,391	-	85	73	33	2,920	2	1,064
MOUNTAIN .....	1	10	2	729	1,872	-	32	23	18	2,484	10	2,393
Montana .....	-	1	-	17	16	-	7	4	-	238	4	506
Idaho .....	-	-	-	255	119	-	4	6	-	110	-	39
Wyoming .....	-	-	1	81	51	-	-	1	3	424	-	7
Colorado .....	-	2	-	105	527	-	11	5	8	463	1	1,546
New Mexico .....	-	2	1	125	122	-	3	3	4	970	3	196
Arizona .....	-	4	-	17	881	-	3	1	-	140	-	19
Utah .....	1	1	-	128	155	-	2	2	3	131	2	77
Nevada .....	-	-	-	1	1	-	2	1	-	8	-	3
PACIFIC .....	2	52	8	2,254	4,356	2	183	184	90	9,358	25	3,827
Washington .....	-	3	-	1,014	977	-	20	16	23	1,461	5	673
Oregon .....	-	4	1	460	133	1	13	14	14	1,737	2	787
California .....	2	42	7	696	3,135	1	144	143	46	5,183	18	2,332
Alaska .....	-	2	-	65	13	-	6	8	3	710	-	9
Hawaii .....	-	1	-	19	98	-	-	3	4	267	-	26
Guam .....	-	-	-	50	15	-	-	12	-	20	-	13
Puerto Rico .....	-	-	15	1,845	703	-	8	4	15	717	1	31
Virgin Islands .....	-	-	-	1	3	-	-	2	-	24	-	2

\* Delayed reports: Measles: Me. 1  
Mumps: Me. 1, N.H. 1  
Rubella: Me. 1, N.H. 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING SEPTEMBER 29, 1973 AND SEPTEMBER 30, 1972 (39th WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES .....	68	745	23,717	131	16	524	15	577	18,118	504	45	2,688
NEW ENGLAND .....	2	25	862	—	1	14	—	2	530	13	—	101
Maine .....	—	6	74	—	—	—	—	—	22	—	—	56
New Hampshire .....	—	1	45	—	—	—	—	—	11	—	—	35
Vermont .....	—	—	24	—	—	—	—	—	22	3	—	3
Massachusetts .....	—	5	453	—	—	13	—	1	237	4	—	6
Rhode Island .....	1	2	72	—	—	—	—	—	74	1	—	—
Connecticut .....	1	11	194	—	1	1	—	1	164	5	—	1
MIDDLE ATLANTIC .....	7	156	4,648	—	1	50	1	29	2,285	71	1	42
Upstate New York .....	1	25	826	—	—	8	—	13	654	6	—	17
New York City .....	3	57	1,729	—	1	19	—	4	630	37	—	—
New Jersey* .....	2	37	815	—	—	14	1	4	379	17	—	2
Pennsylvania .....	1	37	1,278	—	—	9	—	8	622	11	1	23
EAST NORTH CENTRAL .....	11	93	3,583	3	1	36	—	19	1,984	19	3	264
Ohio .....	3	24	1,066	—	—	15	—	14	576	7	—	32
Indiana .....	2	4	472	—	—	—	—	—	223	1	—	51
Illinois .....	3	30	1,069	1	1	9	—	5	260	5	1	68
Michigan .....	1	35	899	2	—	10	—	—	691	5	—	7
Wisconsin .....	2	—	77	—	—	2	—	—	234	1	2	106
WEST NORTH CENTRAL .....	6	38	997	14	1	24	—	20	1,138	20	19	852
Minnesota .....	—	6	123	—	—	4	—	—	186	—	5	309
Iowa .....	—	3	99	—	—	—	—	7	246	3	6	176
Missouri .....	5	14	459	13	—	12	—	7	139	14	4	84
North Dakota .....	1	1	35	—	—	—	—	—	28	—	1	134
South Dakota .....	—	6	76	—	—	1	—	—	80	—	—	77
Nebraska .....	—	—	67	—	—	1	—	2	226	1	—	3
Kansas .....	—	8	138	1	1	6	—	4	233	2	3	69
SOUTH ATLANTIC .....	13	123	4,712	16	4	239	7	290	4,627	151	5	240
Delaware .....	—	—	75	—	—	—	1	8	63	—	—	3
Maryland .....	—	17	517	5	—	6	—	13	432	15	—	14
District of Columbia .....	—	9	215	—	—	—	—	—	476	14	—	—
Virginia .....	2	15	620	4	—	3	—	59	419	30	2	71
West Virginia .....	—	4	223	—	4	6	—	4	71	1	—	22
North Carolina .....	—	17	770	2	—	5	3	130	1,184	3	1	6
South Carolina* .....	1	6	372	—	—	6	—	30	303	37	—	5
Georgia .....	2	16	768	3	—	1	3	45	620	13	2	80
Florida .....	8	39	1,152	2	—	212	—	1	1,059	38	—	39
EAST SOUTH CENTRAL .....	8	64	2,087	10	2	39	6	103	1,767	26	2	366
Kentucky .....	1	10	487	1	—	10	—	—	166	8	—	197
Tennessee .....	5	33	657	7	1	12	2	50	608	8	2	128
Alabama .....	2	7	548	—	—	10	3	20	679	3	—	40
Mississippi .....	—	14	395	2	1	7	1	33	314	7	—	1
WEST SOUTH CENTRAL .....	12	57	2,412	83	—	22	1	98	2,273	89	6	468
Arkansas* .....	1	11	302	60	—	4	—	19	503	1	—	101
Louisiana .....	3	—	363	—	—	6	—	—	558	36	1	38
Oklahoma .....	4	7	207	17	—	2	—	70	215	5	2	141
Texas .....	4	39	1,540	6	—	10	1	9	997	47	3	188
MOUNTAIN .....	—	18	768	4	—	10	—	8	917	20	—	43
Montana .....	—	1	37	—	—	—	—	1	27	—	—	10
Idaho .....	—	—	28	—	—	1	—	2	113	1	—	—
Wyoming .....	—	1	22	—	—	1	—	1	8	—	—	—
Colorado .....	—	5	141	—	—	2	—	1	361	5	—	—
New Mexico .....	—	8	162	1	—	2	—	3	87	3	—	6
Arizona* .....	—	3	294	—	—	4	—	—	216	5	—	24
Utah .....	—	—	37	2	—	—	—	—	70	—	—	3
Nevada .....	—	—	47	1	—	—	—	—	35	6	—	—
PACIFIC .....	9	171	3,648	1	6	90	—	8	2,597	95	9	312
Washington .....	3	5	281	—	—	7	—	5	306	4	1	7
Oregon .....	1	8	194	—	—	2	—	2	185	—	1	8
California .....	5	106	2,831	1	6	76	—	1	1,971	90	7	289
Alaska .....	—	8	84	—	—	4	—	—	67	—	—	8
Hawaii .....	—	44	258	—	—	1	—	—	68	1	—	—
Guam .....	—	—	35	—	—	—	—	—	—	—	—	—
Puerto Rico .....	4	23	379	—	—	7	—	—	97	13	—	39
Virgin Islands .....	—	—	2	—	—	—	—	—	1	—	—	—

\* Delayed reports: Tetanus: Ark. 1  
Tularemia: Ark. 1  
Typhoid: N.J. delete 1, Ark. 1, Ariz. 1

RMSF: N.J. delete 2, Ark. 2  
Syphilis: S.C. delete 16  
Rabies: Ariz. 2

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING SEPTEMBER 29, 1973

Week No.  
39

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumon and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	657	417	31	41	SOUTH ATLANTIC	1,237	642	38	
Boston, Mass.	196	112	14	11	Atlanta, Ga.	177	75	10	
Bridgeport, Conn.	42	27	2	2	Baltimore, Md.	213	99	6	
Cambridge, Mass.	28	25	—	6	Charlotte, N. C.	58	29	—	
Fall River, Mass.	27	19	—	—	Jacksonville, Fla.	104	49	3	
Hartford, Conn.	45	27	1	2	Miami, Fla.	73	45	2	
Lowell, Mass.	26	15	—	3	Norfolk, Va.	51	22	2	
Lynn, Mass.	16	9	—	1	Richmond, Va.	85	44	2	
New Bedford, Mass.	25	17	—	1	Savannah, Ga.	30	14	3	
New Haven, Conn.	50	28	8	—	St. Petersburg, Fla.	134	110	—	
Providence, R. I.	50	32	2	7	Tampa, Fla.	72	43	2	
Somerville, Mass.	5	5	—	—	Washington, D. C.	187	83	8	
Springfield, Mass.	44	28	1	4	Wilmington, Del.	53	29	—	
Waterbury, Conn.	40	29	—	—					
Worcester, Mass.	63	44	3	4	EAST SOUTH CENTRAL	668	377	30	
MIDDLE ATLANTIC	3,024	1,792	109	161	Birmingham, Ala.	118	53	3	
Albany, N. Y.	57	33	5	—	Chattanooga, Tenn.	58	39	4	
Allentown, Pa.	25	19	—	5	Knoxville, Tenn.	45	30	—	
Buffalo, N. Y.	154	85	8	14	Louisville, Ky.	93	56	5	
Camden, N. J.	48	28	2	2	Memphis, Tenn.	147	87	6	
Elizabeth, N. J.	23	12	—	—	Mobile, Ala.	67	33	4	
Erie, Pa.	36	23	1	2	Montgomery, Ala.	29	19	2	
Jersey City, N. J.	65	44	4	4	Nashville, Tenn.	111	60	6	
Newark, N. J.	61	27	1	1	WEST SOUTH CENTRAL	1,204	645	60	
New York City, N. Y.†	1,418	842	38	64	Austin, Tex.	36	26	1	
Paterson, N. J.	32	21	—	3	Baton Rouge, La.	40	24	3	
Philadelphia, Pa.	498	279	30	34	Corpus Christi, Tex.	34	18	4	
Pittsburgh, Pa.	181	108	5	11	Dallas, Tex.	170	87	6	
Reading, Pa.	40	30	—	3	El Paso, Tex.	51	24	7	
Rochester, N. Y.	127	75	6	8	Fort Worth, Tex.	87	48	3	
Schenectady, N. Y.	30	20	1	—	Houston, Tex.	261	129	12	
Scranton, Pa.	37	28	—	1	Little Rock, Ark.	50	30	—	
Syracuse, N. Y.	98	60	6	1	New Orleans, La.	142	73	12	
Trenton, N. J.	40	25	1	2	Oklahoma City, Okla.*	84	48	4	
Utica, N. Y.	22	15	1	1	San Antonio, Tex.	122	65	2	
Yonkers, N. Y.	32	18	—	5	Shreveport, La.	57	32	2	
EAST NORTH CENTRAL	2,506	1,467	88	61	Tulsa, Okla.	70	41	4	
Akron, Ohio	63	41	3	—	MOUNTAIN	575	329	32	
Canton, Ohio	41	29	3	5	Albuquerque, N. Mex.	72	39	3	
Chicago, Ill.	701	385	21	18	Colorado Springs, Colo.	34	24	—	
Cincinnati, Ohio	147	92	3	3	Denver, Colo.	134	77	12	
Cleveland, Ohio	191	111	2	2	Las Vegas, Nev.	34	22	—	
Columbus, Ohio	138	74	6	—	Ogden, Utah	22	15	—	
Dayton, Ohio	96	55	2	—	Phoenix, Ariz.	117	59	9	
Detroit, Mich.	335	192	18	11	Pueblo, Colo.	22	12	3	
Evansville, Ind.	34	26	—	1	Salt Lake City, Utah	61	39	3	
Fort Wayne, Ind.	50	30	2	1	Tucson, Ariz.	79	42	2	
Gary, Ind.	31	12	2	3	PACIFIC	1,748	1,076	66	
Grand Rapids, Mich.	60	33	5	5	Berkeley, Calif.	16	10	—	
Indianapolis, Ind.	154	87	7	3	Fresno, Calif.	55	26	4	
Madison, Wis.	28	16	—	3	Glendale, Calif.	31	26	—	
Milwaukee, Wis.	135	102	1	—	Honolulu, Hawaii	50	22	4	
Peoria, Ill.	49	30	5	—	Long Beach, Calif.	123	77	5	
Rockford, Ill.	55	34	3	6	Los Angeles, Calif.	603	383	22	
South Bend, Ind.	49	30	2	—	Oakland, Calif.	91	53	1	
Toledo, Ohio	108	64	3	—	Pasadena, Calif.	35	30	—	
Youngstown, Ohio	41	24	—	—	Portland, Oreg.	123	83	1	
WEST NORTH CENTRAL	752	445	40	33	Sacramento, Calif.	62	34	3	
Des Moines, Iowa	72	39	3	—	San Diego, Calif.	126	66	11	
Duluth, Minn.	31	14	—	3	San Francisco, Calif.	178	102	9	
Kansas City, Kans.	40	19	7	2	San Jose, Calif.	41	30	1	
Kansas City, Mo.	123	67	8	1	Seattle, Wash.	114	71	1	
Lincoln, Nebr.	25	17	3	—	Spokane, Wash.	48	30	4	
Minneapolis, Minn.	78	54	—	2	Tacoma, Wash.	52	33	—	
Omaha, Nebr.	65	34	4	1	Total	12,371	7,190	494	
St. Louis, Mo.	217	134	10	18	Expected Number	12,111	6,862	543	
St. Paul, Minn.	63	44	—	1	Cumulative Total (includes reported corrections for previous weeks)	502,628	295,563	18,831	
Wichita, Kans.	38	23	5	5					

† Delayed report for week ending September 22, 1973

\* Estimate based on average percent of divisional total

CURRENT TRENDS  
PRIMARY AND SECONDARY SYPHILIS —  
United States, August 1973

In August 1973, provisionally reported cases of infectious syphilis in the United States increased 1.3% over the number reported in August 1972. The 17,015 cases reported between January and August 1973 represent an increase of 668 cases (4.1%) over the same period in 1972. Since April 1973, reported cases of primary and secondary syphilis have

increased 1.3% over those reported in the same period of 1972. The diminished rate of increase of infectious syphilis observed since April is believed to be a result of intensified federal, state, and local venereal disease control efforts.

(Reported by the Venereal Disease Branch, Bureau of State Services, CDC.)

SUMMARY OF REPORTED CASES OF INFECTIOUS SYPHILIS

CASES OF PRIMARY AND SECONDARY SYPHILIS: By Reporting Areas — August 1973 and August 1972 — Provisional Data

Reporting Area	August		Cumulative Jan. — Aug.		Reporting Area	August		Cumulative Jan. — Aug.	
	1973	1972	1973	1972		1973	1972	1973	1972
NEW ENGLAND .....	89	62	757	577	EAST SOUTH CENTRAL .....	113	143	895	949
Maine .....	6	3	20	21	Kentucky .....	29	56	247	214
New Hampshire .....	1	1	6	6	Tennessee .....	37	36	286	331
Vermont .....	—	—	13	11	Alabama .....	23	28	124	144
Massachusetts .....	71	38	530	323	Mississippi .....	24	23	238	260
Rhode Island .....	—	1	14	27	WEST SOUTH CENTRAL .....	214	256	1,794	2,027
Connecticut .....	11	19	174	189	Arkansas .....	9	13	101	142
MIDDLE ATLANTIC .....	487	542	3,836	3,895	Louisiana .....	59	89	548	601
Upstate New York .....	38	42	271	290	Oklahoma .....	15	7	119	65
New York City .....	281	342	2,373	2,684	Texas .....	131	147	1,026	1,219
Pa. (Excl. Phila.) .....	36	18	180	125	MOUNTAIN .....	59	53	384	343
Philadelphia .....	46	30	329	209	Montana .....	1	—	2	5
New Jersey .....	86	110	683	587	Idaho .....	2	—	9	3
EAST NORTH CENTRAL .....	206	264	1,520	1,751	Wyoming .....	—	—	3	9
Ohio .....	20	26	186	217	Colorado .....	23	11	144	53
Indiana .....	22	48	198	164	New Mexico .....	13	8	54	70
Downstate Illinois .....	27	7	132	100	Arizona .....	13	20	112	138
Chicago .....	84	115	610	712	Utah .....	3	—	11	15
Michigan .....	44	63	337	529	Nevada .....	4	14	49	50
Wisconsin .....	9	5	57	29	PACIFIC .....	400	353	2,898	2,401
WEST NORTH CENTRAL .....	30	38	213	201	Washington .....	12	9	102	82
Minnesota .....	10	11	72	37	Oregon .....	2	6	32	32
Iowa .....	4	9	34	37	California .....	384	336	2,715	2,258
Missouri .....	11	8	79	80	Alaska .....	1	1	11	13
North Dakota .....	—	—	1	—	Hawaii .....	1	1	38	16
South Dakota .....	1	1	4	2	U.S. TOTAL .....	2,341	2,312	17,015	16,347
Nebraska .....	4	2	9	16	TERRITORIES .....	66	92	540	598
Kansas .....	—	7	14	29	Puerto Rico .....	63	83	519	541
SOUTH ATLANTIC .....	743	601	4,718	4,203	Virgin Islands .....	3	9	21	57
Delaware .....	7	4	66	43	Note: Cumulative Totals include revised and delayed reports through previous months.				
Maryland .....	96	80	580	636					
District of Columbia .....	74	79	525	547					
Virginia .....	71	66	498	313					
West Virginia .....	2	1	13	16					
North Carolina .....	44	36	413	346					
South Carolina .....	98	29	481	308					
Georgia .....	124	171	855	940					
Florida .....	227	135	1,287	1,054					

EPIDEMIOLOGIC NOTES AND REPORTS  
BABESIOSIS — Massachusetts

On September 4, 1973, a 48-year-old woman living on Nantucket Island, Massachusetts, presented to her private physician complaining of daily recurrent chills and fever and myalgia in her legs and side that had begun 1 week before; she also reported moderately severe depression. She denied headache, nausea, and diarrhea and on physical examination had no rash, adenopathy, or splenomegaly.

The patient had received a tick bite in mid-August which became inflamed. On August 17, her physician had excised the local abscess containing the tick head.

Because of this history, Rocky Mountain spotted fever was suspected, and the patient was admitted to a local hos-

pital. She was treated with tetracycline but did not respond. On September 6, her temperature was 104°F., and her peripheral blood was examined at the request of her physician. Small ring-like intracellular parasites were seen and identified as *Babesia* organisms. The diagnosis was confirmed at CDC, where the organism was thought to be *Babesia microti*.

The patient's white blood cell counts ranged from 3,900 to 5,700 during her hospitalization, with a relative lymphocytosis as high as 57%. Blood chemistry examination was unremarkable except for moderately elevated alkaline phosphatase and LDH enzymes. Treatment with chloroquine phosphate was started on September 6, 1.5 gm by mouth

## BABESIOSIS — Continued

initially then 0.5 gm daily; a prompt reduction in fever was noted. Only rare organisms were seen on peripheral smear after September 8, and none were seen after September 17. On September 10, however, her hematocrit dropped from 38% to 27%, and hemolysis was diagnosed; the hemoglobin fell to 8.2 gm%. The patient became moderately hypotensive on 2 occasions. She was transfused with 2 units of blood on September 10 and 13. Her hospitalization was otherwise uneventful, and she was discharged on September 28 on a course of 0.5 gm of chloroquine daily.

Gerbil inoculation tests at the local hospital using the patient's whole blood resulted in growth of *Babesia* organisms after a 15-day incubation; these organisms are being examined for species identification at CDC. The patient's serum was positive at a titer of 1:1024 to *B. microti* antigen by the indirect fluorescent antibody test.

The patient gave a history of insulin-treated *Diabetes mellitus* and of severe hepatitis in 1963. She had no splenectomy, immunosuppressive therapy, or other conditions known to predispose to parasitic infection.

The patient said that she had not traveled outside the United States since 1971 and had lived in southeast Nantucket with her son since June 1973. She gave no history of recent blood transfusion or parenteral drug use. She had 2 dogs, but there were no other pets or farm animals in or near the house; rats lived under the house, but no recent increase in the number of rats or other small rodents had been noticed. Ticks have been relatively common on Cape Cod and Nantucket this year, but the number of cases of Rocky Mountain spotted fever reported has been within the usual low expected range.

(Reported by Paul Cassady, M.D., private physician, Nantucket; A.E. Anderson, M.D., Department of Pathology, Cape Cod Hospital, Hyannis; Nicholas J. Fiumara, M.D., Director, Division of Communicable Diseases, Massachusetts Department of Public Health; and the General Parasitology Section, Parasitology Branch, Bureau of Laboratories, CDC.)

## Editorial Note

Babesiosis is a febrile illness common in many species of domestic animals and rodents in the United States but very rare in humans. It is caused by infection with any of several species of *Babesia*, an intracellular hematogenous sporozoan parasite related to the *Plasmodia* of malaria and transmitted from 1 vertebrate host to another by tick vector. Four previous recognized human cases have occurred, 2 in the United States, 1 of which was also probably acquired on Nantucket Island (1). These 2 cases associated with Nantucket were the only cases reported in patients who had not had a prior splenectomy which presumably would have predisposed them to infection.

The diagnosis of babesiosis is based on the morphologic appearance of the red-cell parasite. *Babesia* can easily be mistaken for *Plasmodia* on peripheral smear, but the intracellular parasites are atypical in shape, produce no pigment, and have no schizont or gametocyte forms. Of the 5 babesiosis cases reported, 2 were fatal; all 3 nonfatal cases were in patients who received chloroquine.

## Reference

1. Western KA, Benson GD, Gleason NN, et al: Babesiosis in a Massachusetts resident. *N Engl J Med* 283:854-856, 1970

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The data in this report are preliminary, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; completed data on a final basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to: Center for Disease Control  
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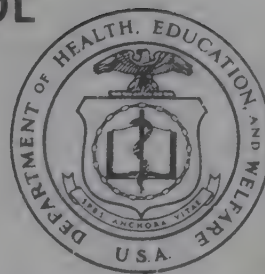
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# Morbidity and Mortality



Vol. 22, No. 40

WEEKLY  
REPORT

For  
Week Ending  
October 6, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE  
DATE OF RELEASE: OCTOBER 12, 1973 - ATLANTA, GEORGIA 30333

## EPIDEMIOLOGIC NOTES AND REPORTS HERPES B ENCEPHALITIS - California

On April 13, 1973, a 28-year-old research assistant in California became ill with right-sided paresthesia, sore throat, and low-grade fever. On April 19, he had anorexia, stiff neck, and difficulty concentrating and moving his right fingers and was hospitalized. His temperature rose to 103°F., and on April 22, he had bladder paralysis. His electroencephalogram became diffusely abnormal, but a brain scan and a carotid arteriogram were normal. Serial spinal taps showed normal pressure, but moderate lymphocytosis and increased protein.

The patient was diagnosed as having encephalitis due to *Herpesvirus B* (*Herpesvirus simiae*, monkey B virus). By May 1, he had bilateral paralysis and a respiratory arrest, and a tracheostomy was performed. Human plasma containing *Herpesvirus B* antibody was supplied by CDC but was not administered since his condition had stabilized; he steadily improved until late June when recovery was nearly complete.

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No viruses could be isolated from stool, urine, throat washing, or cerebrospinal fluid specimens, but serologic tests at the California Regional Primate Research Center, Davis, California, and at the State Viral and Rickettsial Disease Laboratory confirmed the diagnosis.

The patient worked regularly with rhesus monkeys (*Macaca mulatta*) in the laboratory; 9 of the 26 monkeys to

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	40th WEEK ENDING			CUMULATIVE, FIRST 40 WEEKS		
	October 6, 1973	October 7, 1972	MEDIAN 1968-1972	1973	1972	MEDIAN 1968-1972
Aseptic meningitis	123	146	146	3,539	2,955	3,272
Brucellosis	5	5	5	148	149	162
Chickenpox	325	539	539	146,076	115,515	---
Diphtheria	1	1	1	143	76	134
Encephalitis, primary:						
Arthropod-borne and unspecified	40	33	48	1,141	807	1,032
Encephalitis, post-infectious	3	3	4	231	229	288
Hepatitis, serum (Hepatitis B)	148	174	153	6,137	7,025	5,513
Hepatitis, infectious (Hepatitis A)	1,041	1,123	1,067	39,234	42,215	42,215
Malaria	8	7	43	194	722	2,284
Measles (rubeola)	69	146	178	24,465	27,356	27,356
Meningococcal infections, total	15	18	23	1,100	1,066	1,969
Civilian	14	18	22	1,075	1,023	1,771
Military	1	—	1	25	43	196
Mumps	502	493	717	56,768	58,156	78,325
Rubella (German measles)	82	156	262	26,286	21,579	44,624
Tetanus	4	—	4	73	92	94
Tuberculosis, new active	615	619	---	24,345	25,736	---
Tularemia	2	2	3	133	109	120
Typhoid fever	13	9	7	537	276	276
Typhus, tick-borne (Rky. Mt. spotted fever)	3	12	7	581	473	368
Venereal Diseases:						
Gonorrhea	17,144	15,383	---	631,242	573,588	---
Syphilis, primary and secondary	441	590	---	19,805	19,152	---
Rabies in animals	47	62	55	2,736	3,292	2,730

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	6
Botulism:	14	Paralytic:	4
Congenital rubella syndrome: *	20	Psittacosis:	19
Leprosy: Calif.-1, Hawaii-2, Ill.-1	97	Rabies in man:	—
Leptospirosis:	27	Trichinosis: N.J.-1	72
Plague:	2	Typhus, murine: Tex.-1	29

\* Delayed Reports: congenital rubella syndrome: Va. delete 1

which he was exposed were found to have *Herpesvirus B* antibody, indicative of latent infection.

(Reported by the California State Department of Health: California Morbidity, No. 37, September 21, 1973.)

#### Editorial Note

A total of 24 cases of monkey B virus infection have been reported throughout the world, half from the United States. Of the 24 patients, 23 had encephalitis, and 18 died. Of the 5 survivors, 3 had serious neurologic sequelae, 1 was expected to recover completely, and this case had a documented full recovery. Of the 17 cases for which information

is available, 14 had received a bite or scratch wound, 1 had a history of a puncture with a contaminated needle, 1 had been cut on 2 occasions by glass from monkey tissue cell culture, and 1 had no reported prior injury. The mechanism for infection in this case is unknown.

Monkey B virus is most commonly found in rhesus, cynomolgous, and bonnet macaque monkeys. These monkeys are often used in laboratories, and the rarity of this disease despite frequent human contact with infected monkeys suggests a high degree of resistance to the pathogenic effects of this virus.

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### SURVEILLANCE SUMMARY SMALLPOX — Worldwide 1973

Between January 1 and September 18, 1973, a total of 96,951 cases of smallpox were reported to the World Health Organization. This total, for the first 8 months of the year, is the highest reported since 1967, the first year of the global eradication program. All but 265 cases have been recorded by the 4 remaining endemic countries — India accounts for 58% of all cases, Bangladesh for 30%, Pakistan for 8%, and Ethiopia for 4%. However, the increase in incidence this year is almost entirely from 2 countries — India, which has so far reported 56,000 cases compared with 20,000 cases at this time last year, and Bangladesh, which has reported 29,000 cases compared with 8,000 cases by this date in 1972.

There are now 2 principal endemic areas in Asia; Sind and Baluchistan Provinces in Pakistan and Bangladesh and 4 northern states in India. Some cases of smallpox, however, have been reported from almost every part of these 3 countries. Many of the cases and outbreaks have resulted from importations from the principal epidemic areas, but the sources of most have not been properly documented.

In India, 196 of 354 districts have reported cases in 1973. Of these districts, 131 (67%) have continued to report

cases since July 1. Only in the western states of Rajasthan and Punjab and in a few states and territories of the extreme eastern wing does smallpox transmission appear to have been interrupted in this period. Similarly, in Bangladesh, all but 5 of the 56 subdivisions have recorded 1 or more cases this year, and 42 (75%) have recorded cases since July 1. In Pakistan, cases this year have been recorded by 37 of the 55 districts; 20 (54%) have detected cases since July 1.

During the period July-October smallpox incidence is usually at its lowest point of the year, and the fewest areas are involved; however, this summer the disease is still comparatively widespread.

Throughout the 3 remaining endemic countries, major campaigns are beginning to search out and eliminate remaining pockets of infection during this seasonal period of low incidence, and additional international resources are being provided to assist in this effort. However, more effective surveillance measures will be required if the autumn campaign is to be successful.

(Reported by the World Health Organization: Weekly Epidemiological Record, Vol. 48, No. 38, September 21, 1973.)

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### INTERNATIONAL NOTES CHOLERA — Algeria, Mozambique

#### Algeria

On September 28, 1973, 39 cases of cholera were reported from the Wilayas of Aures, El Asnam, Mostaganem, Oran, and Tlemcen. All necessary control measures including extensive health education activities have been implemented. Selective vaccination has been carried out on the basis of epidemiologic studies in areas of high risk.

#### Mozambique

A report was received on October 1 confirming the

presence of 15 cases of cholera and 1 death in the Beira Health Delegation of the Manica and Sofala District. This is the first official notification of the presence of cholera in Mozambique in this pandemic. No details have yet been received concerning the biotype or serotype of the vibrio isolated.

(Reported by the World Health Organization: Weekly Epidemiological Record, Vol. 48, No. 40, October 5, 1973.)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING OCTOBER 6, 1973 AND OCTOBER 7, 1972 (40th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
				1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES .....	123	5	325	1	143	40	33	3	148	1,041	1,123
NEW ENGLAND .....	9	-	50	-	3	2	2	-	4	41	79
Maine *	-	-	-	-	-	-	-	-	-	1	8
New Hampshire*	2	-	1	-	-	1	-	-	1	3	9
Vermont .....	-	-	9	-	-	-	-	-	1	4	1
Massachusetts .....	4	-	-	-	1	1	2	-	1	21	30
Rhode Island .....	-	-	24	-	2	-	-	-	-	7	7
Connecticut .....	3	-	16	-	-	-	-	-	1	5	24
MIDDLE ATLANTIC .....	13	-	7	-	-	3	2	-	33	106	166
Upstate New York .....	7	-	-	-	-	2	-	-	14	48	32
New York City .....	2	-	7	-	-	-	-	-	-	-	44
New Jersey .....	3	-	NN	-	-	-	-	-	8	34	50
Pennsylvania .....	1	-	-	-	-	1	2	-	11	24	40
EAST NORTH CENTRAL .....	18	-	104	-	-	16	15	-	17	203	216
Ohio .....	1	-	8	-	-	12	7	-	6	27	54
Indiana .....	-	-	11	-	-	-	-	-	1	13	6
Illinois .....	-	-	-	-	-	-	6	-	1	64	52
Michigan .....	17	-	26	-	-	-	-	-	5	90	98
Wisconsin*	-	-	59	-	-	4	2	-	4	9	6
WEST NORTH CENTRAL .....	8	-	29	-	7	5	5	-	3	29	57
Minnesota .....	3	-	-	-	-	1	-	-	-	5	3
Iowa .....	-	-	27	-	-	2	1	-	-	1	14
Missouri .....	5	-	-	-	-	2	1	-	-	9	6
North Dakota .....	-	-	-	-	-	-	-	-	-	-	2
South Dakota .....	-	-	-	-	7	-	-	-	-	3	4
Nebraska .....	-	-	2	-	-	-	-	-	-	1	5
Kansas .....	-	-	-	-	-	-	3	-	3	10	23
SOUTH ATLANTIC .....	20	5	23	1	1	-	2	-	12	135	135
Delaware .....	-	-	1	-	-	-	-	-	-	3	-
Maryland .....	2	-	-	-	-	-	-	-	6	15	20
District of Columbia .....	-	-	-	-	-	-	1	-	-	1	1
Virginia .....	10	1	4	-	-	-	1	-	-	23	10
West Virginia .....	1	-	17	-	-	-	-	-	-	6	5
North Carolina .....	4	-	NN	-	-	-	-	-	3	9	12
South Carolina .....	-	1	1	-	-	-	-	-	1	11	2
Georgia .....	-	3	-	-	-	-	-	-	-	24	9
Florida .....	3	-	-	1	1	-	-	-	2	43	76
EAST SOUTH CENTRAL .....	11	-	2	-	1	2	1	-	14	65	79
Kentucky .....	5	-	2	-	-	-	-	-	8	26	26
Tennessee .....	6	-	NN	-	-	-	1	-	-	26	33
Alabama .....	-	-	-	-	1	2	-	-	3	10	14
Mississippi .....	-	-	-	-	-	-	-	-	3	3	6
WEST SOUTH CENTRAL .....	9	-	26	-	14	1	-	-	7	199	91
Arkansas *	-	-	-	-	-	-	-	-	-	1	4
Louisiana*	-	-	NN	-	-	-	-	-	-	-	11
Oklahoma .....	2	-	2	-	-	1	-	-	-	12	4
Texas .....	7	-	24	-	14	-	-	-	7	186	72
MOUNTAIN .....	4	-	18	-	34	-	-	-	-	48	67
Montana .....	1	-	1	-	-	-	-	-	-	7	8
Idaho .....	2	-	-	-	-	-	-	-	-	10	6
Wyoming .....	-	-	7	-	-	-	-	-	-	1	1
Colorado .....	1	-	4	-	-	-	-	-	-	22	24
New Mexico .....	-	-	6	-	20	-	-	-	-	2	2
Arizona*	-	-	-	-	14	-	-	-	-	-	16
Utah .....	-	-	-	-	-	-	-	-	-	4	5
Nevada .....	-	-	-	-	-	-	-	-	-	2	5
PACIFIC .....	31	-	66	-	83	11	6	3	58	215	233
Washington .....	4	-	54	-	75	1	-	-	4	43	37
Oregon .....	1	-	-	-	3	-	-	-	4	25	33
California*	24	-	-	-	3	10	6	3	47	141	152
Alaska .....	-	-	9	-	2	-	-	-	3	-	-
Hawaii .....	2	-	3	-	-	-	-	-	-	6	11
Guam *	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	-	8	-	-	-	-	-	1	4	28
Virgin Islands .....	-	-	2	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: N. H. 7  
 Brucellosis: Wis. 1  
 Chickenpox: Me. 2, Guam 8

Hepatitis B: Me. 4, La. delete 1  
 Hepatitis A: Me. 5, N.H. 1, Ark. 3, Ariz. 3  
 Calif. delete 4, Guam 3

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING OCTOBER 6, 1973

Week No.  
40

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	970	662	21	63	SOUTH ATLANTIC	1,238	672	42	41
Boston, Mass.	511	352	8	34	Atlanta, Ga.	129	61	7	3
Bridgeport, Conn.	38	26	—	5	Baltimore, Md.	217	109	5	3
Cambridge, Mass.	29	23	—	10	Charlotte, N. C.	54	28	2	—
Fall River, Mass.	32	28	—	—	Jacksonville, Fla.	94	56	1	1
Hartford, Conn.	45	26	3	1	Miami, Fla.	122	67	9	3
Lowell, Mass.	34	29	—	1	Norfolk, Va.	53	31	2	8
Lynn, Mass.	23	14	2	—	Richmond, Va.	82	40	4	5
New Bedford, Mass.	28	19	1	2	Savannah, Ga.	43	25	2	3
New Haven, Conn.	45	30	1	2	St. Petersburg, Fla.	94	72	1	1
Providence, R. I.	57	28	2	4	Tampa, Fla.	76	45	2	3
Somerville, Mass.	8	4	—	—	Washington, D. C.	218	109	6	9
Springfield, Mass.	35	21	1	1	Wilmington, Del.	56	29	1	2
Waterbury, Conn.	31	24	—	—	EAST SOUTH CENTRAL	628	340	33	24
Worcester, Mass.	54	38	3	3	Birmingham, Ala.	92	50	10	3
MIDDLE ATLANTIC	3,027	1,797	106	132	Chattanooga, Tenn.	35	22	—	—
Albany, N. Y.	56	35	5	1	Knoxville, Tenn.	32	23	—	1
Allentown, Pa.	21	13	—	2	Louisville, Ky.	130	66	6	8
Buffalo, N. Y.	116	70	2	10	Memphis, Tenn.	141	73	8	3
Camden, N. J.	43	24	2	3	Mobile, Ala.	55	37	2	2
Elizabeth, N. J.	28	17	—	—	Montgomery, Ala.	31	18	—	3
Erie, Pa.	34	18	3	2	Nashville, Tenn.	112	51	7	4
Jersey City, N. J.	44	26	—	2	WEST SOUTH CENTRAL	1,180	608	52	41
Newark, N. J.	84	36	10	5	Austin, Tex.	37	18	2	2
New York City, N. Y.†	1,523	897	50	41	Baton Rouge, La.	37	18	5	1
Paterson, N. J.	30	18	1	3	Corpus Christi, Tex.	42	22	3	1
Philadelphia, Pa.	502	286	19	20	Dallas, Tex.	160	83	4	2
Pittsburgh, Pa.	170	102	6	18	El Paso, Tex.	39	21	1	5
Reading, Pa.	48	34	1	2	Fort Worth, Tex.	70	36	6	1
Rochester, N. Y.	106	74	1	10	Houston, Tex.	237	111	11	10
Schenectady, N. Y.	25	18	—	1	Little Rock, Ark.	55	20	1	2
Scranton, Pa.	48	32	3	3	New Orleans, La.	152	78	1	3
Syracuse, N. Y.	52	33	2	1	Oklahoma City, Okla. *	83	46	4	2
Trenton, N. J.	28	16	—	—	San Antonio, Tex.	135	75	8	4
Utica, N. Y.	31	20	—	3	Shreveport, La.	59	29	2	3
Yonkers, N. Y.	38	28	1	5	Tulsa, Okla.	74	51	4	5
EAST NORTH CENTRAL	2,435	1,394	126	59	MOUNTAIN	504	262	25	16
Akron, Ohio	60	41	4	—	Albuquerque, N. Mex.	29	9	3	5
Canton, Ohio	37	21	1	1	Colorado Springs, Colo.	37	23	—	3
Chicago, Ill.	679	349	34	12	Denver, Colo.	121	72	2	1
Cincinnati, Ohio	139	89	5	2	Las Vegas, Nev.	23	11	—	—
Cleveland, Ohio	188	105	17	6	Ogden, Utah	23	11	—	2
Columbus, Ohio	139	73	10	8	Phoenix, Ariz.	127	54	6	1
Dayton, Ohio	113	66	3	1	Pueblo, Colo.	27	14	2	3
Detroit, Mich.	344	184	16	6	Salt Lake City, Utah	60	38	5	1
Evansville, Ind.	46	35	—	1	Tucson, Ariz.	57	30	7	—
Fort Wayne, Ind.	33	22	2	1	PACIFIC	1,657	1,040	36	30
Gary, Ind.	21	7	1	1	Berkeley, Calif.	17	10	—	—
Grand Rapids, Mich.	55	42	3	9	Fresno, Calif.	37	25	1	1
Indianapolis, Ind.	130	76	7	2	Glendale, Calif.	32	26	1	1
Madison, Wis.	36	24	3	5	Honolulu, Hawaii	45	29	—	2
Milwaukee, Wis.	146	92	3	2	Long Beach, Calif.	89	57	1	3
Peoria, Ill.	40	18	5	—	Los Angeles, Calif.	539	338	10	9
Rockford, Ill.	32	19	4	—	Oakland, Calif.	88	54	3	1
South Bend, Ind.	32	19	3	1	Pasadena, Calif.	33	26	2	—
Toledo, Ohio	111	74	2	—	Portland, Oreg.	140	87	3	2
Youngstown, Ohio	54	38	3	1	Sacramento, Calif.	62	35	2	1
WEST NORTH CENTRAL	775	500	35	23	San Diego, Calif.	119	68	3	1
Des Moines, Iowa	69	46	—	—	San Francisco, Calif.	176	110	2	1
Duluth, Minn.	16	13	—	—	San Jose, Calif.	71	44	—	1
Kansas City, Kans.	37	16	7	1	Seattle, Wash.	127	75	2	1
Kansas City, Mo.	107	73	3	—	Spokane, Wash.	47	31	5	3
Lincoln, Nebr.	37	26	2	4	Tacoma, Wash.	35	25	1	3
Minneapolis, Minn.	103	58	6	2	Total	12,414	7,275	476	429
Omaha, Nebr.	94	57	2	1	Expected Number	12,155	6,899	542	392
St. Louis, Mo.	191	120	11	10	Cumulative Total (includes reported corrections for previous weeks)	515,147	302,893	19,319	20,796
St. Paul, Minn.	73	54	3	2					
Wichita, Kans.	48	37	1	3					

†Delayed report for week ending Sept. 29, 1973

\*Estimate based on average percent of divisional total

CURRENT TRENDS  
RESULTS OF SCREENING FOR GONORRHEA —  
United States, 12-Month Period Ending June 30, 1973

In the 12-month period ending June 30, 1973, gonorrhea screening programs cultured specimens from 4,939,592 females; 242,276 (4.9%) were positive. Table I reflects the results of such screening by type of health care facility securing the specimen. Although the positivity rates were highest (18.9%) in venereal disease clinics, only 12% of all tests were performed at such clinics. Some 88% of all tests were performed in settings other than venereal disease clinics, and in these, positivity rates ranged from 1.0% among females

tested at industrial screening facilities to 7.6% among enrollees in manpower training programs. Some 1,133,785 females were tested by private physicians, and 25,816 (2.3%) were positive. Preliminary data indicate that 1,203,291 females were tested by all types of facilities in July and August 1973 or about 600,000 per month. The overall positivity rate for all sources for this period was 4.7%.

(Reported by the Venereal Disease Branch, Bureau of State Services, CDC.)

Table 1  
Results of Gonorrhea Culture Tests on Females  
United States\* — July 1972-June 1973

Source of Test	Number Tested	Number Positive	Percent Positive	Source of Test	Number Tested	Number Positive	Percent Positive
<b>Health Care Providers (Excluding VD Clinics)</b>	<b>4,356,670</b>	<b>132,387</b>	<b>3.0</b>	<b>Health Care Providers (Cont'd)</b>			
Health Dept. Non-VD Clinic	1,040,659	36,836	3.5	Private Physicians	1,133,785	25,816	2.3
Family Planning	679,605	23,043	3.4	Private Family Planning Groups	509,258	10,728	2.1
Prenatal, Ob-Gyn	125,590	4,838	3.9	Group Health Clinics	50,543	1,146	2.3
Cancer Detection	18,758	246	1.3	Student Health Centers	131,540	2,508	1.9
Combinations or Other	216,706	8,709	4.0	Manpower Training Agencies	8,866	677	7.6
Public/Private Hospital —Outpatient	838,702	33,793	4.0	Industrial Screening	7,270	75	1.0
Family Planning	96,541	2,576	2.7	Military/Dependents	69,235	770	1.1
Prenatal, Ob-Gyn	235,025	8,282	3.5	Correction or Detention Centers	40,077	2,166	5.4
Cancer Detection	12,012	175	1.5	Not Specified	136,527	3,660	2.7
Combinations or Other	495,124	22,760	4.6	<b>Venereal Disease Clinics</b>	<b>582,922</b>	<b>109,889</b>	<b>18.9</b>
Public/Private Hospital —Inpatient	45,505	1,763	3.9	Gonorrhea Contacts	78,717	24,691	31.4
Obstetric	9,458	303	3.2	Syphilis: Contact/Cluster/Reactor	5,909	912	15.4
Gynecologic	970	42	4.3	Other	498,296	84,286	16.9
Combinations or Other	35,077	1,418	4.0	<b>Total (All Clinics)</b>	<b>4,939,592</b>	<b>242,276</b>	<b>4.9</b>
Community Health Centers	344,703	12,449	3.6				
Family Planning	157,594	3,930	2.5				
Prenatal, Ob-Gyn	20,378	643	3.2				
Cancer Detection	1,987	44	2.2				
Combinations or Other	164,744	7,832	4.8				

\*Includes reports from Puerto Rico and the Virgin Islands.

INTERNATIONAL NOTES  
QUARANTINE MEASURES

The following changes should be made in the "Supplement" — U.S. Designated Yellow Fever Vaccination Centers," MMWR, Vol. 22, No. 32:

**CALIFORNIA**

**Fresno**

County Department of Public Health  
93702  
(Change telephone number to  
209-488-3752)

**San Diego**

U.S. Public Health Service Outpatient  
Clinic 92101  
(Change telephone number to  
714-293-6440)

**San Francisco**

Central Medical Group 94111  
(Change telephone number to  
415-982-8380)

**Sacramento**

County Health Department 45817  
(Change Clinic hours to by appointment,  
Wednesday 1:30-4 p.m.)

## QUARANTINE MEASURES — Continued

## ILLINOIS

## Chicago

International Health Center  
Rush-Presbyterian-St. Luke's Medical  
Center  
Professional Building 452  
1753 West Congress Parkway 60612  
Fee Charged  
Clinic hours: Tues. and Thurs. 2-5 p.m.  
Telephone: 312-942-5885  
(NEW CENTER)

Clearing Industrial Emergency  
Hospital, Inc. 60638  
(Change name to Clearing Industrial  
Medical Clinic)  
(Change clinic hours to Mon. and Thurs.,  
2-5 p.m.)

## IOWA

## Sioux City

Health Department 51102  
(Change Clinic hours to by appointment)

## LOUISIANA

## Baton Rouge

East Baton Rouge Parish Health Unit  
(Add zip code 70802)

## MICHIGAN

## Ann Arbor

University of Michigan Hospital 48104  
(Change Clinic hours to Tues., 9-11 a.m.)

## MISSOURI

## Kansas City

City Health Department 64108  
(Change Fee charged to Fee no charge)  
(Change Clinic hours to by appointment  
Wed. 2 p.m.)

## NEW YORK

## New York

Life Extension Institute  
(Change telephone number to 575-8300)

## OHIO

## Columbus

Family Medicine Clinic  
University Hospitals 43210  
(Change address to 5 East Means Hall  
466 West 10th Avenue 43212)  
(Change telephone number to 422-4414)  
(Change clinic hours to by appointment  
Thurs., 5 p.m.)

## OKLAHOMA

## Enid

Garfield County Health Department  
73701  
(Change Clinic hours to last Monday each  
month 2 p.m.)

## PENNSYLVANIA

## Erie

County Department of Health 16507  
(Add to clinic hours: By appointment.)

## Pittsburgh

U.S. Public Health Service Outpatient  
Clinic 19106  
(Change Clinic hours to Thurs.,  
1:30-2:30 p.m.)

## TENNESSEE

## Knoxville

Knox County Health Department 37917  
(Change telephone number to 546-4606)

## TEXAS

## Amarillo

Bi-City-County Health Unit 79105  
(Change zip code to 79186)  
(Change Clinic hours to second and  
fourth Wed., each month,  
1:30-2:30 p.m.)

## VIRGINIA

## Charlottesville

Albemarle-Charlottesville Health Depart-  
ment 22902  
(Add to address 1138 Rose Hill Drive)  
(Change area code to 804)

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Deborah L. Jones, B.S.

The data in this report are provisional, based on weekly telegraphs to CDC by  
state health departments. The reporting week concludes at close of business on  
Friday; compiled data on a national basis are officially released to the public on  
the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality,  
the editor welcomes accounts of interesting outbreaks or case investigations of  
current interest to health officials.

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PUBLIC HEALTH SERVICE  
CENTER FOR DISEASE CONTROL  
ATLANTA, GEORGIA 30333

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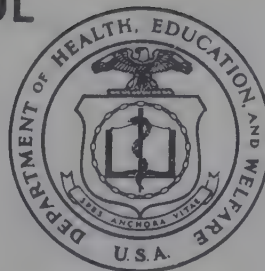
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India

# Morbidity and Mortality



Vol. 22, No. 41

WEEKLY  
REPORT

For  
Week Ending  
October 13, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE

DATE OF RELEASE: OCTOBER 19, 1973 - ATLANTA, GEORGIA 30333

## EPIDEMIOLOGIC NOTES AND REPORTS

### DIPHTHERIA ON A NAVAJO INDIAN RESERVATION Arizona, New Mexico

Between January 1 and October 7, 1973, 44 cases of diphtheria were reported on or near the Navajo Indian Reservation in Arizona and New Mexico (Figure 1); 29 of the 44 cases occurred since August 1. Thirty-seven persons were hospitalized. Five patients had myocarditis and/or varying degrees of neurologic involvement, and 2 of these had respiratory arrests and required artificial ventilation. There were no deaths. Throat swabs from 28 of the 44 persons were positive for toxigenic *Corynebacterium diphtheriae*, biotype intermedius. From the same area a total of 10 cases were reported in 1970, 30 cases in 1971, and 20 cases in 1972.

Of the 29 cases occurring since August 1, 1973, 22 were in females, and 24 were in persons 15 years of age or older (Table 1). Throat swabs from 118 contacts of 12 culture-

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<i>Bacillus cereus</i> Food Poisoning - United Kingdom	348

proven cases were taken, and 18 were positive for toxigenic *C. diphtheriae*, biotype intermedius (Table 2). Although the majority of cases were in persons 15 years of age or older, the carrier rates were highest in persons under 15 years.

Epidemiologic investigation showed that 5 cases occurring before August 1 were in students at a single school, which accounted for almost half of the cases reported in the 5- to 14-year age group since January 1. In September a sixth case

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	41st WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 41 WEEKS		
	October 13, 1973	October 14, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	108	189	186	3,647	3,144	3,431
Brucellosis	4	7	5	152	156	165
Chickenpox	491	519	—	146,567	116,034	—
Diphtheria	—	6	4	144	82	138
Encephalitis, primary:						
Arthropod-borne and unspecified	31	33	51	1,179	840	1,089
Encephalitis, post-infectious	1	3	3	232	232	289
Hepatitis, serum (Hepatitis B)	132	143	143	6,269	7,168	5,666
Hepatitis, infectious (Hepatitis A)	962	1,014	1,041	40,201	43,229	43,229
Malaria	2	7	70	196	729	2,318
Measles (rubeola)	98	151	151	24,563	27,507	27,507
Meningococcal infections, total	18	12	29	1,119	1,078	1,983
Civilian	18	12	28	1,094	1,035	1,785
Military	—	—	—	25	43	198
Mumps	526	636	971	57,294	58,792	79,440
Rubella (German measles)	112	128	309	26,398	21,707	44,889
Tetanus	2	1	2	75	93	99
Tuberculosis, new active	496	1,170	—	24,837	26,906	—
Tularemia	2	3	3	134	112	126
Typhoid fever	9	11	11	546	287	287
Typhus, tick-borne (Rky. Mt. spotted fever)	10	10	5	591	483	376
Venereal Diseases:						
Gonorrhea	16,329	14,954	—	647,571	588,542	—
Syphilis, primary and secondary	458	532	—	20,263	19,684	—
Rabies in animals	48	55	57	2,786	3,347	2,788

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	6
Botulism:	14	Paralytic:	4
Congenital rubella syndrome: Calif.-1, La.-7	28	Psittacosis:	19
Leprosy:	97	Rabies in man:	—
Leptospirosis: Md.-1	28	Trichinosis:	72
Plague:	2	Typhus, murine:	29

## DIPHTHERIA — Continued

Figure 1  
44 DIPHTHERIA CASES, BY WEEK OF ONSET  
NAVAJO INDIAN RESERVATION — JANUARY 1-OCTOBER 6, 1973

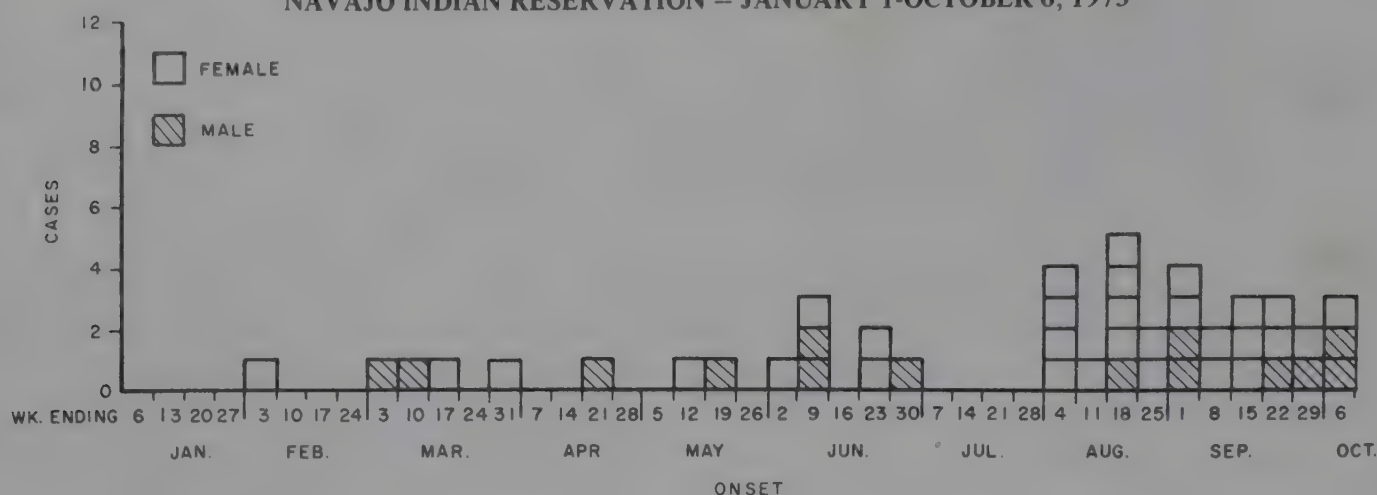


Table 1  
Age and Sex Distribution for 29 Diphtheria Cases  
Navajo Indian Reservation — August 1-October 7, 1973

	Age Group (Years)			Total
	0-4	5-14	15+	
Male	1	1	5	7
Female	0	2	20	22
Total	1	3	25	29
Rate per 100,000	23	27	103	73

was reported in a teacher at the same school. The only other cases that could be linked epidemiologically were 2 cases in neighbors and 2 in a sister-in-law and a brother-in-law living in separate households.

Vaccination histories from clinic and hospital records of injection dates were available for 28 cases; 6\* had been fully vaccinated\*\*, 14 had been incompletely vaccinated, and 8 had no history of vaccination. Vaccination campaigns have now been conducted in many schools in the area, and in the city of Gallup, New Mexico, a program was recently carried out jointly by the state and county health departments and the

\*One patient received last Td booster in November 1963 and became ill in June 1973.

\*\*Fully vaccinated is defined as having received a primary series (2 injections of Td with a booster) within the last 10 years or a primary series (3 DPT injections) with a booster within the last 10 years.

Table 2  
Age and Sex Distribution and Proportion of Persons Culture-Positive for *C. diphtheriae* Among Contacts of 12 Culture-Proven Cases  
Navajo Indian Reservation — 1973

	Age Group (Years)			Total	Percent Positive
	0-4	5-14	15+		
Male	1/5*	6/21	3/28	10/50	20.0
Female	2/8	4/22	2/38	8/68	11.8
Total	3/13	10/43	5/66	18/118	15.3
Percent Positive	23.1	23.3	7.6	15.3	

\*Number positive/Number tested

Field Health Unit, Gallup Indian Medical Center. In addition, plans are being made to increase the number of vaccinations given in out-patient clinics of the Indian Health Service, and a large rural vaccination campaign is now in progress.

(Reported by Bernice Laughlin, R.N., Director, Field Health Services, Michael Ogden, M.D., Director, Gallup, New Mexico, Service Unit, John Coulehan, M.D., Director, Field Services Unit, Fort Defiance, Arizona, Service Unit, V. Alton Dohner, M.D., Assistant Area Director, Navajo Area, Indian Health Service; Victor M. Zalma, M.D., Director, Health Agency, State of New Mexico; Philip M. Hotchkiss, D.V.M., State Epidemiologist, Arizona State Department of Health; Phoenix Laboratories Division, Bureau of Epidemiology, CDC; and 2 EIS Officers.)

## FOODBORNE SALMONELLOSIS — Minnesota

On September 14, 1973, 10 persons in a small Minnesota town who were ill with diarrhea, abdominal pain or cramps, chills, fever, nausea or vomiting, and headache were hospitalized, 9 locally, 1 in Minneapolis. On September 18, another person with similar symptoms was admitted to the same local hospital. All those hospitalized recovered with supportive care alone; the median hospital stay was 3 days. Stool specimens from 9 of the 10 locally hospitalized patients yielded *Salmonella infantis*, *Salmonella agona*, or both; 1 of these was also positive for *Salmonella schwarzengrund*.

All patients had attended a company picnic on September 11 and/or a smorgasbord dinner on September 12 at the bar-restaurant which catered the picnic. Other persons who

had eaten 1 or both meals were also reported to be ill. Local and state health authorities were notified and began an epidemiologic investigation.

Approximately 55 persons ate at the picnic and 133 at the smorgasbord, including 15 who ate at both. On September 15, a questionnaire was administered, mainly by telephone, to 33 persons who ate only at the picnic, 37 who ate only at the smorgasbord, and 9 who ate at both. Illness was defined as the onset of 1) diarrhea, 2) abdominal pain or cramps, or 3) nausea or vomiting after eating 1 of the meals. About 75% of those interviewed were ill with symptoms similar to those of the hospitalized patients; 92% had diarrhea, and 88% had abdominal pain or cramps.

(Continued on page 347)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING OCTOBER 13, 1973 AND OCTOBER 14, 1972 (41st WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
	1973	1973	1973	1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES .....	108	4	491	-	144	31	33	1	132	962	1,014
NEW ENGLAND .....	3	-	44	-	3	1	-	-	-	44	64
Maine*	-	-	-	-	-	-	-	-	-	1	5
New Hampshire	-	-	-	-	-	-	-	-	-	5	6
Vermont	-	-	1	-	-	-	-	-	-	1	3
Massachusetts	1	-	-	-	1	-	-	-	-	27	26
Rhode Island	2	-	35	-	2	-	-	-	-	3	10
Connecticut	-	-	8	-	-	1	-	-	-	7	14
MIDDLE ATLANTIC .....	33	-	11	-	-	6	3	-	12	87	127
Upstate New York	-	-	1	-	-	1	1	-	3	28	45
New York City	4	-	8	-	-	-	-	-	-	-	20
New Jersey	23	-	NN	-	-	2	-	-	1	28	29
Pennsylvania	6	-	2	-	-	3	2	-	8	31	33
EAST NORTH CENTRAL .....	27	-	141	-	-	12	13	-	15	125	173
Ohio	5	-	5	-	-	7	6	-	-	21	27
Indiana	3	-	7	-	-	-	1	-	-	21	6
Illinois	1	-	-	-	-	1	1	-	1	15	55
Michigan*	18	-	25	-	-	4	5	-	11	65	77
Wisconsin	-	-	104	-	-	-	-	-	3	3	8
WEST NORTH CENTRAL .....	6	2	85	-	7	3	4	-	3	47	46
Minnesota	5	-	-	-	-	-	4	-	-	2	3
Iowa	1	-	73	-	-	1	-	-	1	3	2
Missouri	-	-	2	-	-	-	-	-	1	33	22
North Dakota	-	-	10	-	-	-	-	-	-	-	6
South Dakota	-	-	-	-	7	-	-	-	-	3	1
Nebraska	-	-	-	-	-	-	-	-	-	-	-
Kansas	-	2	-	-	-	2	-	-	1	6	12
SOUTH ATLANTIC .....	15	2	27	-	1	4	6	-	13	171	139
Delaware	-	-	1	-	-	-	-	-	-	4	3
Maryland	-	-	2	-	-	-	1	-	4	10	26
District of Columbia	2	-	1	-	-	-	-	-	3	-	1
Virginia	6	1	-	-	-	-	2	-	2	7	11
West Virginia	-	-	21	-	-	1	1	-	1	2	7
North Carolina	2	-	NN	-	-	1	-	-	1	37	15
South Carolina	2	-	2	-	-	2	-	-	-	25	16
Georgia	-	1	-	-	-	-	-	-	-	23	17
Florida	3	-	-	-	1	-	2	-	2	63	43
EAST SOUTH CENTRAL .....	3	-	19	-	1	1	2	-	15	50	39
Kentucky	1	-	9	-	-	-	-	-	7	15	17
Tennessee	1	-	NN	-	-	1	-	-	5	26	13
Alabama	-	-	9	-	1	-	1	-	-	-	4
Mississippi*	1	-	1	-	-	-	1	-	3	9	5
WEST SOUTH CENTRAL .....	2	-	25	-	14	-	2	-	8	115	120
Arkansas*	-	-	-	-	-	-	-	-	-	3	4
Louisiana	1	-	NN	-	-	-	-	-	4	17	3
Oklahoma	1	-	1	-	-	-	-	-	1	23	37
Texas	-	-	24	-	14	-	2	-	3	72	76
MOUNTAIN .....	-	-	24	-	35	1	-	-	3	66	82
Montana	-	-	10	-	-	-	-	-	-	13	3
Idaho	-	-	-	-	-	-	-	-	-	1	16
Wyoming	-	-	2	-	-	-	-	-	-	4	2
Colorado	-	-	5	-	-	-	-	-	2	12	7
New Mexico	-	-	2	-	20	1	-	-	1	34	27
Arizona*	-	-	-	-	15	-	-	-	-	-	15
Utah	-	-	3	-	-	-	-	-	-	2	7
Nevada	-	-	2	-	-	-	-	-	-	-	5
PACIFIC .....	19	-	115	-	83	3	3	1	63	257	224
Washington	-	-	104	-	75	-	-	-	5	34	28
Oregon	2	-	-	-	3	-	-	-	3	20	35
California	16	-	-	-	3	3	3	1	55	169	155
Alaska	-	-	5	-	2	-	-	-	-	33	-
Hawaii	1	-	6	-	-	-	-	-	-	1	6
Guam	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	-	-	3	-	-	-	-	-	-	22	19
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-

\* Delayed reports: Diphtheria: Ariz. 1  
Encephalitis, primary: Mich. 7

Hepatitis A: Me. 1, Mich. delete 7, Miss. delete 1, Ark. 2, Ariz. 6

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING OCTOBER 13, 1973 AND OCTOBER 14, 1972 (41st WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	2	196	98	24,563	27,507	18	1,119	1,078	526	57,294	112	26,398
NEW ENGLAND .....	1	16	22	7,427	3,232	1	48	45	59	3,073	4	3,654
Maine .....	—	—	—	67	244	—	1	4	5	346	—	69
New Hampshire .....	—	—	17	874	302	—	7	3	—	197	—	377
Vermont .....	—	2	—	119	128	—	3	—	—	267	—	47
Massachusetts .....	1	7	4	3,957	735	1	13	21	14	900	3	2,054
Rhode Island .....	—	1	—	605	524	—	3	11	27	393	—	216
Connecticut .....	—	6	1	1,805	1,299	—	21	6	13	970	1	891
MIDDLE ATLANTIC .....	—	29	10	2,517	1,046	5	154	131	41	7,367	9	4,212
Upstate New York .....	—	15	5	811	128	3	55	32	NN	NN	6	433
New York City .....	—	2	3	919	364	1	31	39	13	4,605	2	474
New Jersey .....	—	5	1	425	494	—	36	25	3	1,512	1	3,011
Pennsylvania .....	—	7	1	362	60	1	32	35	25	1,250	—	294
EAST NORTH CENTRAL .....	—	23	32	8,612	11,196	3	149	155	97	14,558	28	6,073
Ohio .....	—	4	—	285	256	2	62	61	6	2,700	2	692
Indiana .....	—	3	1	651	1,264	—	4	11	18	1,260	7	957
Illinois .....	—	12	7	2,083	4,152	1	25	34	12	2,443	1	969
Michigan .....	—	4	8	4,388	2,017	—	42	42	23	3,999	3	1,859
Wisconsin .....	—	—	16	1,205	3,507	—	16	7	38	4,156	15	1,596
WEST NORTH CENTRAL .....	—	7	4	446	970	—	84	74	39	4,791	5	1,218
Minnesota .....	—	1	—	21	22	—	8	23	1	83	—	221
Iowa .....	—	1	—	277	674	—	19	4	28	2,938	4	195
Missouri .....	—	1	—	53	164	—	32	20	3	692	1	267
North Dakota .....	—	1	4	62	53	—	3	—	3	69	—	276
South Dakota .....	—	—	—	—	7	—	4	2	—	19	—	23
Nebraska .....	—	1	—	6	23	—	10	9	—	147	—	141
Kansas .....	—	2	—	27	27	—	8	16	4	843	—	95
SOUTH ATLANTIC .....	—	32	6	1,243	2,193	1	189	245	33	6,695	22	2,166
Delaware .....	—	—	1	9	51	—	—	1	1	269	—	14
Maryland .....	—	5	—	13	15	—	26	36	1	637	—	10
District of Columbia .....	—	1	—	8	2	—	4	10	—	131	—	3
Virginia .....	—	8	—	421	62	—	36	54	2	709	—	624
West Virginia .....	—	—	1	216	281	—	5	8	11	2,278	14	327
North Carolina .....	—	7	—	4	34	1	41	30	NN	NN	—	202
South Carolina .....	—	1	2	62	216	—	12	20	—	356	—	86
Georgia .....	—	3	—	152	172	—	22	18	—	31	—	12
Florida .....	—	7	2	358	1,360	—	43	68	18	2,284	8	888
EAST SOUTH CENTRAL .....	—	13	2	611	1,054	1	102	83	40	4,772	6	1,339
Kentucky .....	—	8	2	377	526	1	36	27	15	1,435	2	399
Tennessee .....	—	—	—	165	193	—	41	28	13	2,207	3	542
Alabama .....	—	5	—	12	150	—	15	16	11	668	—	187
Mississippi .....	—	—	—	57	185	—	10	12	1	462	1	211
WEST SOUTH CENTRAL .....	—	12	7	700	1,530	3	172	134	71	3,934	6	1,468
Arkansas .....	—	—	1	70	13	—	13	9	21	380	—	112
Louisiana .....	—	2	—	84	90	2	41	41	—	85	—	99
Oklahoma .....	—	2	—	55	10	—	30	8	3	446	—	178
Texas .....	—	8	6	491	1,417	1	88	76	47	3,023	6	1,079
MOUNTAIN .....	—	10	1	731	1,895	—	33	26	16	2,512	8	2,405
Montana .....	—	1	—	17	16	—	7	4	4	242	—	507
Idaho .....	—	—	—	256	134	—	4	8	—	110	—	40
Wyoming .....	—	—	—	81	51	—	—	1	—	424	—	7
Colorado .....	—	2	—	105	530	—	11	5	8	479	4	1,550
New Mexico .....	—	2	1	122	125	—	3	3	4	978	3	201
Arizona *	—	4	—	21	883	—	4	1	—	140	—	19
Utah .....	—	1	—	128	155	—	2	3	—	131	—	77
Nevada .....	—	—	—	1	1	—	2	1	—	8	1	4
PACIFIC .....	1	54	14	2,276	4,391	4	188	185	130	9,592	24	3,863
Washington .....	—	3	1	1,016	978	—	20	16	10	1,501	11	688
Oregon .....	—	4	1	461	133	2	15	14	37	1,794	1	788
California .....	1	44	12	715	3,169	2	147	144	46	5,261	12	2,352
Alaska .....	—	2	—	65	13	—	6	8	32	762	—	9
Hawaii .....	—	1	—	19	98	—	—	3	5	274	—	26
Guam .....	—	—	—	50	16	—	—	13	—	23	—	13
Puerto Rico .....	—	—	3	1,875	720	—	8	4	5	732	2	33
Virgin Islands .....	—	—	—	7	3	—	—	2	—	24	—	2

\* Delayed reports: Meningococcal infections: Ariz. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING OCTOBER 13, 1973 AND OCTOBER 14, 1972 (41st WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES . . . . .	75	496	24,837	134	9	546	10	591	16,329	458	48	2,786
NEW ENGLAND . . . . .	2	10	904	—	1	16	1	3	301	14	1	104
Maine . . . . .	—	2	80	—	—	—	—	—	22	—	—	57
New Hampshire . . . . .	—	—	45	—	—	—	—	—	20	—	1	36
Vermont . . . . .	—	—	24	—	—	—	—	—	13	—	—	3
Massachusetts . . . . .	—	4	478	—	1	14	1	2	—	8	—	6
Rhode Island . . . . .	1	3	77	—	—	—	—	—	20	—	—	—
Connecticut . . . . .	1	1	200	—	—	2	—	1	226	6	—	2
MIDDLE ATLANTIC . . . . .	7	108	4,880	—	2	55	—	29	2,469	101	1	43
Upstate New York . . . . .	1	16	855	—	2	10	—	13	356	8	1	20
New York City . . . . .	3	36	1,811	—	—	21	—	4	917	52	—	—
New Jersey . . . . .	2	24	870	—	—	15	—	4	423	19	—	—
Pennsylvania . . . . .	1	32	1,344	—	—	9	—	8	773	22	—	23
EAST NORTH CENTRAL . . . . .	12	67	3,700	3	2	41	—	19	2,376	20	1	266
Ohio * . . . . .	3	20	1,102	—	—	16	—	14	765	—	—	32
Indiana . . . . .	3	1	482	—	—	—	—	—	300	8	—	51
Illinois . . . . .	3	31	1,111	1	—	10	—	5	248	6	—	68
Michigan . . . . .	1	15	927	2	1	12	—	—	840	6	—	7
Wisconsin . . . . .	2	—	78	—	1	3	—	—	223	—	1	108
WEST NORTH CENTRAL . . . . .	6	22	1,036	14	—	24	—	20	792	6	17	880
Minnesota . . . . .	—	—	126	—	—	4	—	—	118	3	9	324
Iowa . . . . .	—	3	103	—	—	—	—	7	202	1	3	180
Missouri . . . . .	5	15	487	13	—	12	—	7	200	2	3	89
North Dakota . . . . .	1	1	36	—	—	—	—	—	24	—	1	135
South Dakota . . . . .	—	—	76	—	—	1	—	—	36	—	—	77
Nebraska . . . . .	—	2	69	—	—	1	—	2	89	—	—	3
Kansas . . . . .	—	1	139	1	—	6	—	4	123	—	1	72
SOUTH ATLANTIC . . . . .	16	112	4,929	18	1	244	6	296	3,698	141	8	249
Delaware . . . . .	—	3	82	—	—	—	—	8	32	—	—	3
Maryland . . . . .	—	15	546	6	1	8	1	14	321	18	—	14
District of Columbia . . . . .	—	10	228	—	—	—	—	—	339	12	—	—
Virginia . . . . .	2	19	662	5	—	3	—	59	356	16	4	75
West Virginia . . . . .	1	5	234	—	—	7	—	4	41	1	—	22
North Carolina * . . . . .	—	16	806	2	—	5	2	132	554	21	3	9
South Carolina . . . . .	1	—	372	—	—	6	2	32	284	23	—	5
Georgia . . . . .	2	16	795	3	—	3	1	46	755	9	1	82
Florida . . . . .	10	28	1,204	2	—	212	—	1	1,016	41	—	39
EAST SOUTH CENTRAL . . . . .	8	46	2,218	10	—	39	3	108	1,654	49	2	370
Kentucky * . . . . .	1	8	504	1	—	10	—	—	166	14	—	198
Tennessee . . . . .	5	9	694	7	—	12	1	52	586	7	—	129
Alabama . . . . .	2	22	604	—	—	10	2	23	621	19	2	42
Mississippi . . . . .	—	7	416	2	—	7	—	33	281	9	—	1
WEST SOUTH CENTRAL . . . . .	13	53	2,548	84	2	24	—	100	2,016	53	14	498
Arkansas* . . . . .	1	6	319	59	—	4	—	20	147	3	—	107
Louisiana . . . . .	4	2	380	—	—	6	—	—	399	24	3	41
Oklahoma . . . . .	4	—	215	18	—	2	—	71	182	1	2	145
Texas . . . . .	4	45	1,634	7	2	12	—	9	1,288	25	9	205
MOUNTAIN . . . . .	—	13	821	4	—	10	—	8	628	11	1	48
Montana . . . . .	—	—	41	—	—	—	—	1	36	1	—	10
Idaho . . . . .	—	2	30	—	—	1	—	2	51	—	—	—
Wyoming . . . . .	—	—	23	—	—	1	—	1	3	1	—	—
Colorado . . . . .	—	—	152	—	—	2	—	1	339	9	—	—
New Mexico . . . . .	—	11	173	1	—	2	—	3	143	—	—	6
Arizona* . . . . .	—	—	318	—	—	4	—	—	—	—	—	28
Utah . . . . .	—	—	37	2	—	—	—	—	19	—	1	4
Nevada . . . . .	—	—	47	1	—	—	—	—	37	—	—	—
PACIFIC . . . . .	11	65	3,801	1	1	93	—	8	2,395	63	3	328
Washington . . . . .	4	6	291	—	—	7	—	5	246	1	—	8
Oregon . . . . .	1	3	198	—	—	2	—	2	147	3	—	8
California . . . . .	6	52	2,956	1	1	79	—	1	1,890	59	3	304
Alaska . . . . .	—	—	84	—	—	4	—	—	47	—	—	8
Hawaii . . . . .	—	4	272	—	—	1	—	—	65	—	—	—
Guam . . . . .	—	—	35	—	—	—	—	—	—	—	—	—
Puerto Rico . . . . .	4	10	403	—	—	7	—	—	83	11	3	43
Virgin Islands . . . . .	—	—	2	—	—	—	—	—	—	—	—	—

\* Delayed reports: TB: Ohio delete 2, N.C. delete 1, Ky, delete 1

Tularemia: Ark. delete 1  
Rabies: Ariz. 3

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING OCTOBER 13, 1973

Week No.  
41

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	692	417	31	35	SOUTH ATLANTIC	1,010	578	44	47
Boston, Mass.	219	120	10	10	Atlanta, Ga.	116	48	6	4
Bridgeport, Conn.	43	31	—	2	Baltimore, Md.	145	83	10	4
Cambridge, Mass.	30	24	—	4	Charlotte, N. C.	51	27	2	—
Fall River, Mass.	24	23	—	—	Jacksonville, Fla.	68	42	3	2
Hartford, Conn.	62	31	2	2	Miami, Fla.	103	60	4	6
Lowell, Mass.	21	12	—	4	Norfolk, Va.	52	32	—	5
Lynn, Mass.	23	17	—	2	Richmond, Va.	73	43	1	8
New Bedford, Mass.	23	16	—	—	Savannah, Ga.	28	15	3	2
New Haven, Conn.	50	27	7	1	St. Petersburg, Fla.	107	91	4	8
Providence, R. I.	50	21	6	1	Tampa, Fla.	71	38	3	3
Somerville, Mass.	11	8	—	1	Washington, D. C.	144	69	6	5
Springfield, Mass.	44	27	3	5	Wilmington, Del.	52	30	2	—
Waterbury, Conn.	23	14	1	—	EAST SOUTH CENTRAL	676	377	33	28
Worcester, Mass.	69	46	2	3	Birmingham, Ala.	113	59	5	—
MIDDLE ATLANTIC	2,993	1,874	86	138	Chattanooga, Tenn.	62	37	4	8
Albany, N. Y.	47	29	1	2	Knoxville, Tenn.	36	23	—	—
Allentown, Pa.	26	16	1	2	Louisville, Ky.	123	73	3	6
Buffalo, N. Y.	140	93	5	10	Memphis, Tenn.	155	76	14	4
Camden, N. J.	33	20	2	1	Mobile, Ala.	63	35	3	—
Elizabeth, N. J.	33	20	1	1	Montgomery, Ala.	26	11	1	4
Erie, Pa.	32	17	1	1	Nashville, Tenn.	98	63	3	6
Jersey City, N. J.	60	40	1	2	WEST SOUTH CENTRAL	1,320	691	67	45
Newark, N. J.	72	35	3	2	Austin, Tex.	36	17	3	—
New York City, N. Y.†	1,512	953	34	52	Baton Rouge, La.	38	19	—	2
Paterson, N. J.	41	22	1	—	Corpus Christi, Tex.	27	13	2	—
Philadelphia, Pa.	408	239	20	31	Dallas, Tex.	145	78	5	—
Pittsburgh, Pa.	178	98	9	12	El Paso, Tex.	55	25	3	4
Reading, Pa.	28	18	—	3	Fort Worth, Tex.	82	58	4	2
Rochester, N. Y.	122	95	2	9	Houston, Tex.	212	93	17	4
Schenectady, N. Y.	20	16	—	—	Little Rock, Ark.	64	34	5	4
Scranton, Pa.	37	26	—	2	New Orleans, La.	187	97	12	3
Syracuse, N. Y.	102	65	3	2	Oklahoma City, Okla.*	92	52	5	2
Trenton, N. J.	45	33	—	2	San Antonio, Tex.	140	76	4	4
Utica, N. Y.	23	15	1	2	Shreveport, La.	159	81	6	18
Yonkers, N. Y.	34	24	1	2	Tulsa, Okla.	83	48	1	2
EAST NORTH CENTRAL	2,308	1,324	116	48	MOUNTAIN	498	267	39	24
Akron, Ohio	60	39	3	—	Albuquerque, N. Mex.	24	8	3	1
Canton, Ohio	33	19	—	1	Colorado Springs, Colo.	27	17	—	6
Chicago, Ill.	632	336	35	11	Denver, Colo.	119	55	18	7
Cincinnati, Ohio	141	92	6	4	Las Vegas, Nev.	47	19	8	1
Cleveland, Ohio	184	92	11	4	Ogden, Utah	21	11	—	2
Columbus, Ohio	134	81	9	1	Phoenix, Ariz.	121	71	5	2
Dayton, Ohio	97	55	5	1	Pueblo, Colo.	28	16	1	3
Detroit, Mich.	342	195	15	5	Salt Lake City, Utah	54	29	4	1
Evansville, Ind.	45	32	—	1	Tucson, Ariz.	57	41	—	1
Fort Wayne, Ind.	38	20	3	2	PACIFIC	1,395	830	52	33
Gary, Ind.	14	6	1	2	Berkeley, Calif.	11	7	—	—
Grand Rapids, Mich.	57	38	5	4	Fresno, Calif.	58	34	2	1
Indianapolis, Ind.	141	84	9	—	Glendale, Calif.	16	8	—	—
Madison, Wis.	31	12	—	2	Honolulu, Hawaii	54	24	3	2
Milwaukee, Wis.	120	77	3	1	Long Beach, Calif.	75	51	3	1
Peoria, Ill.	32	15	5	—	Los Angeles, Calif.	382	235	16	8
Rockford, Ill.	42	27	2	5	Oakland, Calif.	76	35	10	—
South Bend, Ind.	33	22	—	2	Pasadena, Calif.	31	22	3	—
Toledo, Ohio	73	45	3	1	Portland, Oreg.	114	72	1	4
Youngstown, Ohio	59	37	1	1	Sacramento, Calif.	57	31	3	—
WEST NORTH CENTRAL	718	461	27	15	San Diego, Calif.	90	52	4	1
Des Moines, Iowa	51	38	2	1	San Francisco, Calif.	179	109	4	2
Duluth, Minn.	23	17	1	1	San Jose, Calif.	54	31	—	2
Kansas City, Kans.	27	18	2	—	Seattle, Wash.	113	67	2	2
Kansas City, Mo.	121	69	3	4	Spokane, Wash.	46	30	—	3
Lincoln, Nebr.	20	16	—	1	Tacoma, Wash.	39	22	1	7
Minneapolis, Minn.	96	67	3	—	Total	11,610	6,819	495	413
Omaha, Nebr.	72	42	5	—	Expected Number	12,214	6,948	542	396
St. Louis, Mo.	177	103	8	4	Cumulative Total (includes reported corrections for previous weeks)	526,746	309,768	19,798	21,220
St. Paul, Minn.	61	41	1	—					
Wichita, Kans.	70	50	2	4					

† Delayed report for week ending October 6, 1973  
\* Estimate based on average percent of divisional total

## SALMONELLOSIS — Continued

On September 20 and 21, data was obtained from an additional 42 persons, most of whom had only eaten at the smorgasbord. In all, 91% of those who had eaten at the picnic (71% of whom were ill) and 61% of those who had eaten at the smorgasbord (80% of whom were ill) were interviewed. It was estimated that 120 of 173 persons who ate 1 or both meals were ill. The median incubation period was 23 hours for those who ate only 1 meal (Figure 2). The median duration of illness was approximately 5 days. Additional stool specimens were obtained from 10 persons interviewed who were not hospitalized; 9 were positive for *S. infantis*, *S. agona*, or both, and 1 was also positive for *S. schwarzengrund*.

Fourteen food items were served at the picnic and 20 at the smorgasbord in addition to alcoholic and soft drinks. Food-specific attack rates implicated potato salad as the vehicle of infection at the picnic ( $p < .001$ ); cumulated data subsequently implicated the chicken dressing and the potato salad as vehicles of infection at the smorgasbord ( $p < .01$  for each).

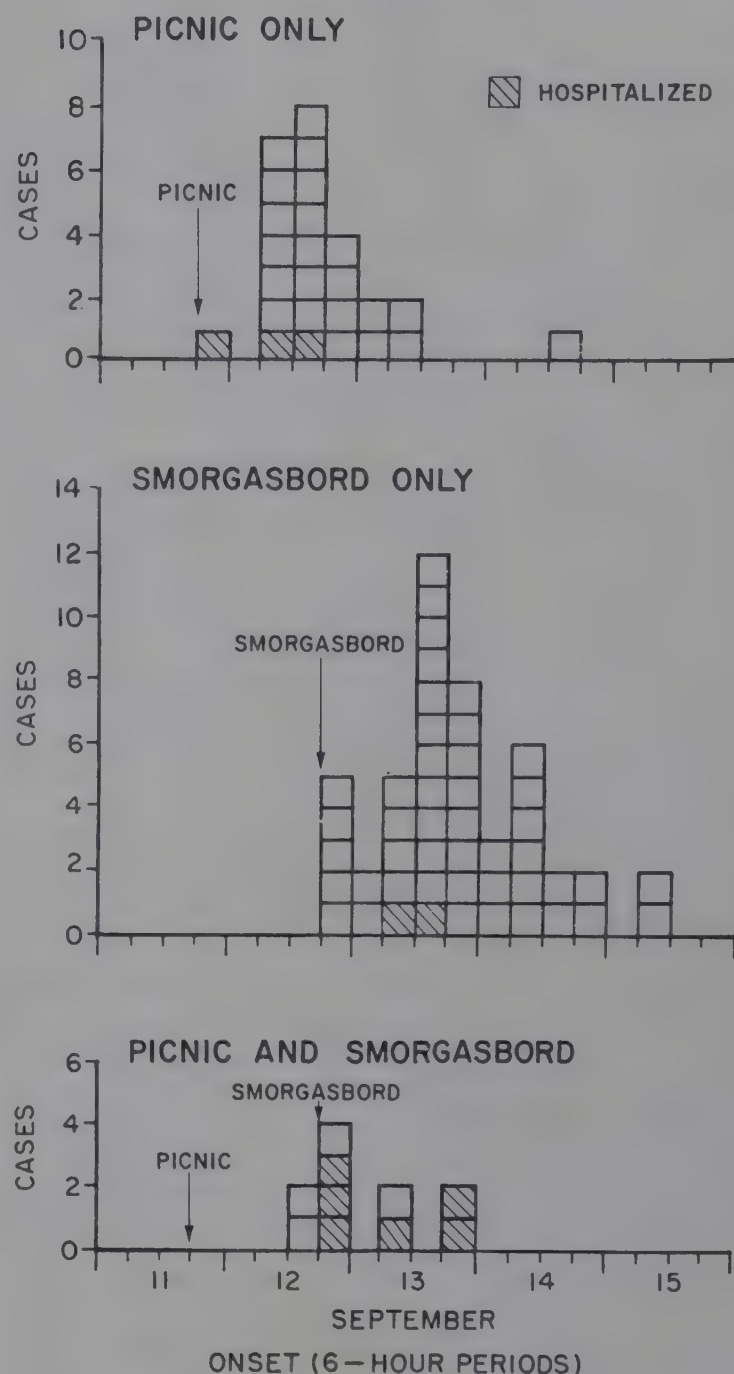
Further investigation at the bar-restaurant revealed that the owner and his wife had prepared all the food for both events. No food served at the picnic was returned and served again at the smorgasbord, but batches of some items served at both meals were prepared at 1 time. On September 10, the day before the picnic, cleaned chickens were delivered to the restaurant, where they were cut up, put in large plastic pans, and stored in a cooler. On the days of the picnic and the smorgasbord the chicken pieces were deep-fried for approximately 7 minutes, then placed in an electric roaster at 225°F. for about 3 hours until served. The same plastic pans used to store the uncooked chicken were also used in preparing the potato salad and cole slaw for both events as well as the bread for the chicken dressing served at the smorgasbord. It is not certain whether or not the pans were washed after being used for the chicken. The dressing was kept in an open-topped heater set at 175°F. for 4 1/2 hours before being served. The same foods were served at the bar-restaurant's smorgasbord every Wednesday night and were prepared the same way.

Stool specimens were obtained from the owner and his wife, who denied having been ill recently; both were positive for *S. infantis*. Cultures of kitchen tap water, all foods or ingredients remaining from the smorgasbord (baked beans, mayonnaise, cole slaw dressing, dry food mix, and sage), raw chickens which had been delivered the day after the smorgasbord from the same farm that had supplied the others, and 6 swabs of kitchen utensils and food-contact surfaces were negative for *Salmonella* organisms.

On September 16, the Minnesota Department of Health closed the food section of the bar-restaurant, which was to have catered a large church picnic the following day. A week later the owner and his wife decided to close their food service permanently.

(Reported by Franklin Anderson, M.D., private physician; D. H. Dewey, M.D., local health officer; Ward McIntire, Robert Lashbrook, John Hawk, and Charles Schneider, Chief, Hotels, Resorts, and Restaurants Section, Leon Damsky, Ph.D., Henry Bauer, Ph.D., Director, Division of Medical Labora-

Figure 2  
SALMONELLOSIS CASES AMONG PERSONS ATTENDING PICNIC ONLY, SMORGASBORD ONLY, AND BOTH, BY TIME OF ONSET  
MINNESOTA — SEPTEMBER 11-15, 1973



tories, D. S. Fleming, M.D., Chief, Disease Prevention and Control Section, Minnesota Department of Health; and an EIS Officer.)

## Editorial Note

Epidemiologic investigation implicated potato salad as the vehicle of transmission at the picnic and both potato salad and chicken dressing at the smorgasbord. The probable source of contamination of these foods was raw chickens containing salmonellae which contaminated the plastic pans in which the potato salad and bread for the chicken dressing were later prepared. Although the owner and his wife had stool specimens positive for *S. infantis*, it is highly unlikely that they harbored 3 serotypes and contaminated food items with them; their infection more likely resulted from ingestion of the contaminated items.

SURVEILLANCE SUMMARY  
*BACILLUS CEREUS* FOOD POISONING — United Kingdom

Since the first reports in the United Kingdom of *Bacillus cereus* food poisoning in 1971 (1), there have been 12 more reports, bringing the total to 18. Twelve Chinese restaurants and "take-out" shops and 1 "health food" restaurant were involved.

Fried or boiled rice was implicated in all of the outbreaks. The rice was prepared by the method found in most Chinese restaurants and "take-out" shops. Large quantities were boiled, then left usually at room temperature for periods ranging from 12 hours to 3 days. The rice was then either reheated (boiled rice) or fried for a short time with freshly beaten egg (fried rice) before being served. *B. cereus* was isolated from the stool specimen of at least 1 affected person in each reported outbreak in quantities as high as  $10^9$  organisms per gm of stool. The total number of persons reported ill was 57; feces from 40 of the 57 were sampled, and *B. cereus* was isolated from 32. Of the 8 persons from whom the organism was not isolated, most submitted their specimens several days after their symptoms had ceased.

The incubation periods in these outbreaks varied from 15 minutes to 11 hours; in most cases symptoms began 1 1/2 to 4 1/2 hours after the meal. Nausea and vomiting, rather than diarrhea, were the predominant symptoms.

Two of the outbreaks were reported from Scotland, the rest from England and Wales. Thirteen outbreaks occurred during the summer months June-September and only 1 between December and February.

*B. cereus* has been isolated from a number of samples of

uncooked rice grains. Spores of the organisms survive boiling, and the vegetative cells in the boiled product stored at ambient temperature subsequently grow and multiply. Restaurant owners are reluctant to refrigerate boiled rice because the grains stick together, making it difficult to toss them in beaten egg during frying. Until this method of preparing rice is discontinued, outbreaks of *B. cereus* food poisoning may continue to occur. Boiled rice should be freshly cooked in smaller quantities and should not be stored at warm temperatures especially in the range 20°-50°C.

(From notes based on reports to the Public Health Laboratory Service from Public Health and Hospital Laboratories in the United Kingdom and Republic of Ireland, published in the British Medical Journal, September 15, 1973.)

#### Editorial Note

*B. cereus* is an uncommonly reported cause of food-borne disease in the United States; between 1968 and 1973, 7 outbreaks were reported. In addition to the syndrome characterized predominantly by nausea and vomiting and a 1- to 5-hour incubation period, *B. cereus* foodborne illness may also cause diarrhea and abdominal pain after an 8- to 12-hour incubation period (2). The pathogenic mechanism by which *B. cereus* causes illness is unknown.

#### References

1. *Bacillus cereus* food poisoning. Brit Med J 1(5793):189, 1972
2. Goepfert JM, Spira WM, Kim HU: *Bacillus cereus*: food poisoning organism. A review. Journal of Milk and Food Technology 35:213-227, 1972

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

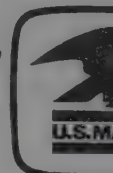
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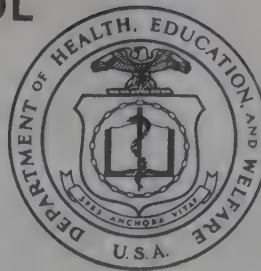
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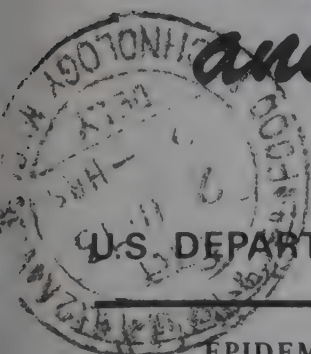
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# *Morbidity and Mortality*



U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE  
DATE OF RELEASE: OCTOBER 26, 1973 - ATLANTA, GEORGIA 30333

## EPIDEMIOLOGIC NOTES AND REPORTS AFRICAN TICK TYPHUS - Rhode Island

On June 16, 1973, a 53-year-old woman in Rhode Island became ill with an influenza-like illness characterized by fever (temperature 101°F.), malaise, myalgia, headache, and rhinitis; she also had 13 painful skin lesions on her forearms, thighs, and popliteal areas which were erythematous and raised with a pustular center. She did not have a cough or conjunctivitis. Two days later she visited a local hospital clinic. The skin lesions were approximately 1 cm in diameter, erythematous, and indurated, with a central, grayish area; no adenopathy was present. The patient was treated symptomatically and placed on oral oxacillin for the infected skin lesions. By June 23, her condition was improving; however, the skin lesions had a black, necrotic center, and a generalized skin rash had developed which ranged from confluent, macular, erythematous areas to discrete, papular, erythematous lesions.

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On June 26, the patient reported that between June 1 and 13 she had visited with friends in Kloof Natal, South Africa, and that she had just received a cable stating that her hostess had African tick typhus. The patient did not recall receiving any tick bites during her visit to South Africa, although she did spend 1 day riding in a jeep in a game reserve and had been in her hosts' garden.

When this information was received, the patient had almost fully recovered, but her antibiotic therapy was changed

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	42nd WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 42 WEEKS		
	October 20, 1973	October 21, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	126	153	145	3,777	3,297	3,571
Brucellosis	4	-	3	156	156	169
Chickenpox	568	631	- - -	147,145	116,665	- - -
Diphtheria	5	2	14	151	84	147
Encephalitis, primary:						
Arthropod-borne and unspecified	49	32	37	1,228	872	1,126
Encephalitis, post-infectious	4	2	3	236	234	292
Hepatitis, serum (Hepatitis B)	189	167	167	6,462	7,335	5,839
Hepatitis, infectious (Hepatitis A)	1,225	1,166	1,166	41,440	44,395	44,395
Malaria	10	12	114	206	741	2,474
Measles (rubeola)	117	167	167	24,680	27,674	27,674
Meningococcal infections, total	25	21	26	1,144	1,099	2,003
Civilian	25	20	23	1,119	1,055	1,804
Military	-	1	1	25	44	199
Mumps	717	613	1,054	58,043	59,405	80,595
Rubella (German measles)	127	471	353	26,526	22,178	45,181
Tetanus	2	3	3	77	96	102
Tuberculosis, new active	591	614	- - -	25,426	27,520	- - -
Tularemia	1	-	2	134	112	128
Typhoid fever	10	11	11	559	298	298
Typhus, tick-borne (Rky. Mt. spotted fever)	10	12	6	601	495	382
Venereal Diseases:						
Gonorrhea	17,613	16,868	- - -	665,172	605,410	- - -
Syphilis, primary and secondary	518	537	- - -	20,81	20,221	- - -
Rabies in animals	76	57	57	2,862	3,404	2,835

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	6
Botulism: Md.-2	16	Paralytic:	4
Congenital rubella syndrome:	28	Psittacosis: * Tex.-1	20
Leprosy: Calif.-1, Hawaii-3, Mass.-1	102	Rabies in man: Ky.-1	1
Leptospirosis:	28	Trichinosis:	72
Plague:	2	Typhus, murine:	29

\* Delayed reports: Psittacosis: Md.-1 (1972).

## TYPHUS — Continued

to oral tetracycline. Complement fixation titers are shown in Table 1. Immunofluorescent antibody titers were 1:160 for both Rocky Mountain spotted fever and African tick typhus in both serum specimens. These results are compatible with a diagnosis of African tick typhus.

(Reported by Lt. Lawrence Narkiewicz, M.D., USNR, Chief E.M. Rafuse, Jr., USN, Naval Hospital, Quonset Point, Rhode Island; Joseph E. Cannon, M.D., Director of Health, Rhode Island Department of Health; and an EIS Officer.)

## Editorial Note

African tick typhus, South African tick-bite fever, and Boutonneuse fever are synonyms for the disease caused by *Rickettsia conori*, an organism endemic in Africa, the Mediterranean Basin, and India. The clinical picture seen here is typical: fever and an initial lesion (tache noire) followed by a maculopapular rash. Various tick species act as vectors, and treatment is similar to that for Rocky Mountain spotted

Table 1  
Complement Fixation Titers in Patient's Acute and Convalescent Serum Specimens — Rhode Island, June 1973

	Serum Specimen	
	Acute	Convalescent
Rickettsialpox	< 1:8	1:64
Rocky Mountain spotted fever	< 1:8	1:128
Murine typhus	< 1:8	< 1:8
Epidemic typhus	< 1:8	< 1:8
<i>Rickettsia canada</i>	< 1:8	< 1:8
Q fever	< 1:8	< 1:8

fever (chlortetracycline or chloramphenicol). Alertness to the patient's recent travel history is important in making an early diagnosis. As in this case, even immunologic studies may not differentiate between the closely related members of the spotted fever group of rickettsiae.

## TYPE B BOTULISM — Kentucky

On September 29, 1973, a 59-year-old female in Sand Gap, Kentucky, experienced nausea and vomiting 6 hours after eating home-canned green beans; she became constipated the following day. These symptoms persisted, and on October 1 she complained of generalized weakness. On October 2, approximately 60 hours after eating the green beans, she developed blurred vision, diplopia, dysphagia, and dizziness, and she was admitted to a local hospital. She was subsequently diagnosed as having had a cerebrovascular accident.

On October 10, she was transferred to a hospital in Lexington. On admission, she was alert, afebrile, and in no respiratory distress. Her pupils were 4 mm in diameter and did not react to light. Although she complained of diplopia, her extraocular movements were normal. She had ptosis on the left, facial muscle weakness which was slightly greater on the left, dysphonia, profound dysphagia, and generalized weakness which was most pronounced in her hip flexors bilaterally. Her gag reflex, tongue strength, sensation, and deep tendon reflexes were normal.

An electromyogram (EMG) performed on October 11 demonstrated facilitation of the muscle action potential during rapid repetitive nerve stimulation, compatible with botulism. The patient received 2 vials of trivalent botulinal antitoxin that afternoon. She has experienced no respiratory difficulty and is slowly improving. A repeat EMG on October 22 was qualitatively unchanged, but facilitation was less marked.

Serum and stool specimens obtained on October 10 were positive for type B botulinal toxin. Gastric fluid, urine, and 2 unopened containers of the home-canned green beans were negative for botulinal toxin. Additional studies are in progress.

Epidemiologic investigation revealed that the only home-

canned food eaten by the patient in the 6 days prior to the onset of her illness was green beans from a single jar which she had opened on September 29. She ate ½ cup of the beans raw and noticed that they tasted and smelled bad. She ate an additional ½ cup after boiling them and discarded the remainder. No one else ate the beans.

The beans had been canned at home in July 1973. The procedure included putting the beans in ½- and 1-gallon jars, adding water, and sealing the jars with a lid; the jars were then placed in a large pot of boiling water for 4 hours.

(Reported by Elizabeth Wright, M.D., private neurologist, Lexington, Kentucky; Linda Fagan, M.D., Director, Cumberland Valley District Health Department, Manchester, Kentucky; Rhenda Bonner, R.N., Nurse Epidemiologist, Calixto Hernandez, M.D., State Epidemiologist, Bureau for Health Services, Kentucky Department for Human Resources; Anaerobe Unit, Enterobacteriology Section, Bacteriology Branch, Bureau of Laboratories, CDC; and an EIS Officer.)

## Editorial Note

This is the seventh outbreak and seventeenth case of botulism reported in the United States this year. This patient's illness was relatively mild, but toxin was still present in her serum 11 days after ingestion of the suspect food. Botulinal toxin has previously been demonstrated in the serum of a patient who had not received botulinal antitoxin 3½ weeks after ingestion of contaminated food (1). This is the second outbreak this year in which type B toxin was demonstrated in feces.

1. Koenig MG, Spickard A, Cardella MA, Rogers DE: Clinical and laboratory observations on type E botulism in man. *Medicine* 43:517-545, 1964

INTERNATIONAL NOTES  
TYPHOID FEVER — Mexico, 1972 and 1973

## Countrywide

Between January and June 1972, outbreaks of typhoid fever occurred in more than 200 urban and rural localities in Mexico producing thousands of cases. In 20 of these out-

breaks, the responsible organism was demonstrated to be the epidemic strain of *Salmonella typhi*, phage type degraded Vi(A). In the same period in 1973, only 2 small villages, in  
(Continued on page 355)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING OCTOBER 20, 1973 AND OCTOBER 21, 1972 (42nd WEEK )

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
	1973	1973	1973	1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES .....	126	4	568	5	151	49	32	4	189	1,225	1,166
NEW ENGLAND .....	2	-	46	-	3	2	-	-	1	39	90
Maine *	-	-	-	-	-	-	-	-	-	-	11
New Hampshire *	-	-	-	-	-	-	-	-	-	4	9
Vermont .....	1	-	-	-	-	-	-	-	-	1	4
Massachusetts .....	-	-	-	-	1	2	-	-	1	16	49
Rhode Island .....	1	-	23	-	2	-	-	-	-	2	4
Connecticut .....	-	-	23	-	-	-	-	-	-	16	13
MIDDLE ATLANTIC .....	10	-	15	-	-	10	2	1	41	148	213
Upstate New York .....	4	-	-	-	-	1	1	1	11	54	35
New York City .....	-	-	13	-	-	-	-	-	4	20	27
New Jersey .....	4	-	NN	-	-	-	-	-	8	31	61
Pennsylvania .....	2	-	2	-	-	9	1	-	18	43	90
EAST NORTH CENTRAL .....	23	-	240	-	-	15	13	-	39	196	181
Ohio .....	6	-	40	-	-	10	7	-	12	33	43
Indiana .....	3	-	26	-	-	2	-	-	-	18	13
Illinois .....	-	-	-	-	-	-	3	-	13	56	67
Michigan .....	11	-	60	-	-	-	3	-	13	83	55
Wisconsin .....	3	-	114	-	-	3	-	-	1	6	3
WEST NORTH CENTRAL .....	6	-	118	-	7	4	9	1	2	34	29
Minnesota *	5	-	18	-	-	-	-	-	-	3	3
Iowa .....	-	-	90	-	-	3	2	1	-	-	8
Missouri .....	1	-	5	-	-	1	5	-	1	7	9
North Dakota .....	-	-	1	-	-	-	-	-	-	-	1
South Dakota .....	-	-	-	-	7	-	-	-	-	14	4
Nebraska .....	-	-	4	-	-	-	2	-	-	-	1
Kansas .....	-	-	-	-	-	-	-	-	1	10	3
SOUTH ATLANTIC .....	24	-	32	-	1	4	3	-	35	289	196
Delaware .....	-	-	3	-	-	-	-	-	-	-	1
Maryland .....	4	-	5	-	-	-	-	-	-	11	47
District of Columbia .....	-	-	2	-	-	-	-	-	-	1	1
Virginia .....	5	-	1	-	-	3	1	-	1	11	17
West Virginia *	-	-	19	-	-	-	-	-	-	5	10
North Carolina .....	2	-	NN	-	-	1	-	-	1	19	42
South Carolina .....	2	-	1	-	-	-	-	-	-	12	8
Georgia .....	9	-	1	-	-	-	1	-	-	23	7
Florida .....	2	-	-	-	1	-	1	-	33	207	63
EAST SOUTH CENTRAL .....	17	-	2	-	1	7	-	-	15	76	62
Kentucky .....	3	-	2	-	-	-	-	-	1	21	29
Tennessee .....	2	-	NN	-	-	-	-	-	2	40	22
Alabama .....	12	-	-	-	1	3	-	-	12	9	3
Mississippi *	-	-	-	-	-	4	-	-	-	6	8
WEST SOUTH CENTRAL .....	13	4	39	-	14	3	1	-	10	170	126
Arkansas *	-	-	-	-	-	-	-	-	-	2	4
Louisiana *	3	-	NN	-	-	1	-	-	3	24	25
Oklahoma .....	1	1	-	-	-	1	1	-	3	16	-
Texas .....	9	3	39	-	14	1	-	-	4	128	97
MOUNTAIN .....	2	-	11	5	42	-	3	-	-	31	62
Montana .....	-	-	1	-	-	-	-	-	-	3	9
Idaho .....	1	-	-	-	-	-	1	-	-	7	22
Wyoming .....	-	-	-	-	-	-	-	-	-	-	-
Colorado .....	1	-	4	-	-	-	2	-	-	7	3
New Mexico .....	-	-	6	5	25	-	-	-	-	11	8
Arizona *	-	-	-	-	17	-	-	-	-	-	11
Utah .....	-	-	-	-	-	-	-	-	-	3	9
Nevada .....	-	-	-	-	-	-	-	-	-	-	-
PACIFIC .....	29	-	65	-	83	4	1	2	46	242	207
Washington .....	3	-	54	-	75	-	-	-	3	41	17
Oregon .....	3	-	-	-	3	-	-	-	3	13	22
California .....	20	-	-	-	3	4	1	2	38	149	158
Alaska .....	1	-	7	-	2	-	-	-	1	31	2
Hawaii .....	2	-	4	-	-	-	-	-	1	8	8
Guam *	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	-	6	-	-	-	-	-	2	16	10
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-

\* Delayed reports: Aseptic meningitis: N.H.-3, Ark.-1  
 Chicken Pox: N.H.-10  
 Diphtheria: Ariz.-2

Hepatitis B: Minn.-2, Miss. delete 1, Ark.-1, Ariz.-2  
 Hepatitis A: Me.-6, N.H.-1, Minn. delete 2, W.Va.-1,  
 Ark.-4, La. delete 2, Ariz.-6, Guam-4

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING OCTOBER 20, 1973 AND OCTOBER 21, 1972 (42nd WEEK) — Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	10	206	117	24,680	27,674	25	1,144	1,099	717	58,043	127	26,526
NEW ENGLAND .....	—	16	26	7,453	3,279	—	48	46	45	3,210	6	3,661
Maine* .....	—	—	—	67	246	—	1	4	—	348	—	70
New Hampshire .....	—	—	11	885	334	—	7	3	—	197	—	377
Vermont .....	—	2	—	119	128	—	3	—	6	273	—	47
Massachusetts .....	—	7	2	3,959	747	—	13	21	13	913	1	2,055
Rhode Island .....	—	1	10	615	524	—	3	12	7	400	3	219
Connecticut .....	—	6	3	1,808	1,300	—	21	6	19	989	2	893
MIDDLE ATLANTIC .....	2	31	14	2,531	1,049	7	161	135	71	7,438	2	4,214
Upstate New York .....	2	17	—	811	128	3	58	32	NN	NN	—	433
New York City .....	—	2	2	921	365	—	31	40	7	4,612	—	474
New Jersey .....	—	5	10	435	494	3	39	26	12	1,524	—	3,011
Pennsylvania .....	—	7	2	364	62	1	33	37	52	1,302	2	296
EAST NORTH CENTRAL .....	4	27	37	8,649	11,247	4	153	157	211	14,769	36	6,109
Ohio .....	—	4	5	290	257	3	65	61	35	2,735	1	693
Indiana .....	—	3	6	657	1,270	—	4	12	20	1,280	—	957
Illinois .....	3	15	3	2,086	4,160	—	25	34	55	2,498	11	980
Michigan .....	1	5	14	4,402	2,028	1	43	43	62	4,061	10	1,869
Wisconsin .....	—	—	9	1,214	3,532	—	16	7	39	4,195	14	1,610
WEST NORTH CENTRAL .....	1	8	1	447	981	1	85	76	71	4,862	6	1,224
Minnesota .....	1	2	—	21	22	—	8	24	—	83	—	221
Iowa .....	—	1	1	278	685	—	19	5	34	2,972	4	199
Missouri .....	—	1	—	53	164	—	32	20	29	721	2	269
North Dakota .....	—	1	—	62	53	—	3	—	—	69	—	276
South Dakota .....	—	—	—	—	7	—	4	2	—	19	—	23
Nebraska .....	—	1	—	6	23	—	10	9	8	155	—	141
Kansas .....	—	2	—	27	27	1	9	16	—	843	—	95
SOUTH ATLANTIC .....	1	33	10	1,253	2,204	5	194	250	92	6,787	27	2,193
Delaware .....	—	—	—	9	51	1	1	1	3	272	—	14
Maryland .....	—	5	—	13	15	—	26	37	2	639	—	10
District of Columbia .....	—	1	—	8	2	—	4	11	4	135	—	3
Virginia .....	—	8	—	421	62	2	38	55	5	714	3	627
West Virginia .....	—	—	2	218	282	—	5	8	23	2,301	2	329
North Carolina .....	—	7	—	4	37	1	42	30	NN	NN	—	202
South Carolina .....	—	1	2	64	216	—	12	20	—	356	—	86
Georgia .....	—	3	—	152	173	—	22	18	1	32	—	12
Florida .....	1	8	6	364	1,366	1	44	70	54	2,338	22	910
EAST SOUTH CENTRAL .....	—	13	3	614	1,063	2	104	86	55	4,827	16	1,355
Kentucky .....	—	8	2	379	535	—	36	28	16	1,451	2	401
Tennessee .....	—	—	—	165	193	1	42	28	36	2,243	13	555
Alabama .....	—	5	—	12	150	—	15	17	3	671	1	188
Mississippi .....	—	—	1	58	185	1	11	13	—	462	—	211
WEST SOUTH CENTRAL .....	—	12	5	705	1,544	3	175	135	62	3,996	9	1,477
Arkansas .....	—	—	—	70	13	—	13	10	5	385	—	112
Louisiana .....	—	2	3	87	90	1	42	41	—	85	—	99
Oklahoma .....	—	2	—	55	10	1	31	8	—	446	1	179
Texas .....	—	8	2	493	1,431	1	89	76	57	3,080	8	1,087
MOUNTAIN .....	—	10	2	733	1,907	—	33	26	15	2,527	2	2,407
Montana .....	—	1	—	17	16	—	7	4	1	243	—	507
Idaho .....	—	—	—	256	144	—	4	8	—	110	2	42
Wyoming .....	—	—	—	81	51	—	—	1	—	424	—	7
Colorado .....	—	2	—	105	531	—	11	5	11	490	—	1,550
New Mexico .....	—	2	2	124	126	—	3	3	2	980	—	201
Arizona .....	—	4	—	21	883	—	4	1	—	140	—	19
Utah .....	—	1	—	128	155	—	2	3	—	131	—	77
Nevada .....	—	—	—	1	1	—	2	1	1	9	—	4
PACIFIC .....	2	56	19	2,295	4,400	3	191	188	95	9,717	23	3,886
Washington* .....	—	3	7	1,023	979	—	20	16	21	1,552	2	690
Oregon .....	—	4	—	461	133	1	16	14	33	1,827	2	790
California .....	2	46	12	727	3,177	1	148	147	29	5,290	19	2,371
Alaska .....	—	2	—	65	13	1	7	8	10	772	—	9
Hawaii .....	—	1	—	19	98	—	—	3	2	276	—	26
Guam*	—	—	—	50	16	—	—	13	—	24	—	13
Puerto Rico .....	—	—	5	1,880	735	—	8	4	41	773	—	33
Virgin Islands .....	—	—	—	7	3	—	—	2	—	24	—	2

\* Delayed reports: Mumps: Me.-2, Wash.-30, Guam-1  
Rubella: Me.-1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING OCTOBER 20, 1973 AND OCTOBER 21, 1972 (42nd WEEK) - Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES .....	77	591	25,426	134	10	559	10	601	17,613	518	76	2,862
NEW ENGLAND .....	2	27	931	-	-	16	-	3	293	14	-	104
Maine .....	-	7	87	-	-	-	-	-	39	-	-	57
New Hampshire* .....	-	-	45	-	-	-	-	-	29	-	-	36
Vermont .....	-	3	27	-	-	-	-	-	4	2	-	3
Massachusetts .....	-	8	486	-	-	14	-	2	-	3	-	6
Rhode Island .....	1	2	79	-	-	-	-	-	50	-	-	-
Connecticut .....	1	7	207	-	-	2	-	1	171	9	-	2
MIDDLE ATLANTIC .....	7	122	5,002	-	1	56	4	33	2,783	117	3	46
Upstate New York .....	1	40	895	-	-	10	-	13	448	5	2	22
New York City .....	3	32	1,843	-	-	21	-	4	1,107	74	-	-
New Jersey .....	2	16	886	-	-	15	1	5	533	20	-	-
Pennsylvania .....	1	34	1,378	-	1	10	3	11	695	18	1	24
EAST NORTH CENTRAL .....	12	60	3,760	3	3	44	-	19	2,376	24	3	269
Ohio .....	3	9	1,111	-	2	18	-	14	631	6	-	32
Indiana .....	3	-	482	-	-	-	-	-	269	4	-	51
Illinois .....	3	32	1,143	1	-	10	-	5	214	6	1	69
Michigan .....	1	19	946	2	1	13	-	-	902	8	-	7
Wisconsin .....	2	-	78	-	-	3	-	-	360	-	2	110
WEST NORTH CENTRAL .....	6	26	1,062	15	-	24	1	21	951	6	19	899
Minnesota .....	-	1	127	-	-	4	1	1	285	-	9	333
Iowa .....	-	5	108	-	-	-	-	7	94	-	3	183
Missouri .....	5	13	500	14	-	12	-	7	312	5	-	89
North Dakota .....	1	-	36	-	-	-	-	-	13	-	1	136
South Dakota .....	-	-	76	-	-	1	-	-	38	-	4	81
Nebraska .....	-	1	70	-	-	1	-	2	99	-	-	3
- Kansas .....	-	6	145	1	-	6	-	4	110	1	2	74
SOUTH ATLANTIC .....	17	111	5,040	17	-	246	4	300	4,059	187	10	259
Delaware .....	-	-	82	-	-	-	-	8	22	-	-	3
Maryland .....	-	11	557	6	-	8	-	14	411	23	-	14
District of Columbia .....	-	7	235	-	-	-	-	-	419	14	-	-
Virginia* .....	2	18	680	4	-	3	1	60	378	22	3	78
West Virginia* .....	1	7	241	-	-	9	-	4	87	1	-	22
North Carolina .....	-	15	821	2	-	5	3	135	485	18	4	13
South Carolina* .....	2	21	393	-	-	6	-	32	464	27	-	5
Georgia .....	2	30	825	3	-	3	-	46	786	10	3	85
Florida .....	10	2	1,206	2	-	212	-	1	1,007	72	-	39
EAST SOUTH CENTRAL .....	8	46	2,262	10	-	39	1	109	1,562	28	2	372
Kentucky* .....	1	12	514	1	-	10	-	-	81	8	-	198
Tennessee .....	5	16	710	7	-	12	-	52	564	10	2	131
Alabama .....	2	13	617	-	-	10	1	24	712	4	-	42
Mississippi .....	-	5	421	2	-	7	-	33	205	6	-	1
WEST SOUTH CENTRAL .....	13	67	2,615	84	1	26	-	100	2,402	64	8	506
Arkansas* .....	1	4	323	59	-	5	-	20	170	2	-	107
Louisiana* .....	4	-	380	-	-	6	-	-	464	19	-	41
Oklahoma .....	4	6	221	18	-	2	-	71	236	2	-	145
Texas .....	4	57	1,691	7	1	13	-	9	1,532	41	8	213
MOUNTAIN .....	-	38	859	4	-	10	-	8	574	8	1	49
Montana .....	-	-	41	-	-	-	-	1	31	-	-	10
Idaho .....	-	-	30	-	-	1	-	2	35	-	-	-
Wyoming .....	-	1	24	-	-	1	-	1	8	1	-	-
Colorado .....	-	14	166	-	-	2	-	1	215	3	-	-
New Mexico .....	-	-	173	1	-	2	-	3	66	2	1	7
Arizona .....	-	19	337	-	-	4	-	-	185	2	-	28
Utah .....	-	1	38	2	-	-	-	-	19	-	-	4
Nevada .....	-	3	50	1	-	-	-	-	15	-	-	-
PACIFIC .....	12	94	3,895	1	5	98	-	8	2,613	70	30	358
Washington .....	4	6	297	-	-	7	-	5	219	4	1	9
Oregon* .....	-	8	206	-	-	2	-	2	300	-	-	8
California .....	8	74	3,030	1	5	84	-	1	2,014	65	29	333
Alaska .....	-	-	84	-	-	4	-	-	43	-	-	8
Hawaii .....	-	6	278	-	-	1	-	-	37	1	-	-
Guam* .....	-	-	35	-	-	-	-	-	-	-	-	-
Puerto Rico .....	4	5	408	-	1	8	-	-	72	30	3	46
Virgin Islands .....	-	-	2	-	-	-	-	-	7	1	-	-

\*Delayed reports: Tetanus: S.C. 1, Ore. delete 1  
TB: Ky. delete 2  
Typhoid: W. Va. 2, Ark. 1  
Gonorrhea: N.H. 2, La. delete 14, Guam 8  
Tularemia: Va. delete 1

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING OCTOBER 20, 1973

Week No.  
42

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	753	485	25	42	SOUTH ATLANTIC	1,191	632	39	5
Boston, Mass.	196	109	6	12	Atlanta, Ga.	113	57	4	5
Bridgeport, Conn.	53	39	—	3	Baltimore, Md.	237	121	9	—
Cambridge, Mass.	29	20	—	5	Charlotte, N. C.	47	19	3	—
Fall River, Mass.	37	27	—	2	Jacksonville, Fla.	86	48	3	—
Hartford, Conn.	77	48	—	2	Miami, Fla.	118	59	2	—
Lowell, Mass.	35	24	3	4	Norfolk, Va.	62	34	1	—
Lynn, Mass.	24	21	—	1	Richmond, Va.	99	47	2	10
New Bedford, Mass.	37	30	1	4	Savannah, Ga.	37	19	1	—
New Haven, Conn.	47	25	2	2	St. Petersburg, Fla.	107	80	1	—
Providence, R. I.	59	27	8	1	Tampa, Fla.	74	42	5	—
Somerville, Mass.	8	5	—	—	Washington, D. C.	174	88	7	—
Springfield, Mass.	59	42	3	2	Wilmington, Del.	37	18	1	—
Waterbury, Conn.	30	24	2	—	EAST SOUTH CENTRAL	682	365	36	20
Worcester, Mass.	62	44	—	4	Birmingham, Ala.	124	50	16	—
MIDDLE ATLANTIC	3,029	1,795	106	143	Chattanooga, Tenn.	65	36	1	4
Albany, N. Y.	50	34	3	2	Knoxville, Tenn.	39	25	—	—
Allentown, Pa.	32	20	2	3	Louisville, Ky.	95	46	7	7
Buffalo, N. Y.	148	89	4	10	Memphis, Tenn.	154	91	5	—
Camden, N. J.	40	20	3	—	Mobile, Ala.	42	30	—	4
Elizabeth, N. J.	37	26	—	1	Montgomery, Ala.	53	33	3	2
Erie, Pa.	23	13	—	3	Nashville, Tenn.	110	54	4	3
Jersey City, N. J.	52	35	—	1	WEST SOUTH CENTRAL	1,270	680	46	54
Newark, N. J.	79	41	3	2	Austin, Tex.	41	19	1	4
New York City, N. Y. <sup>†</sup>	1,437	861	42	51	Baton Rouge, La.	64	35	3	—
Paterson, N. J.	34	17	2	—	Corpus Christi, Tex.	44	20	3	2
Philadelphia, Pa.	495	257	23	39	Dallas, Tex.	180	90	9	1
Pittsburgh, Pa.	171	92	8	9	El Paso, Tex.	47	30	1	9
Reading, Pa.	36	27	2	1	Fort Worth, Tex.	89	49	6	1
Rochester, N. Y.	124	83	4	12	Houston, Tex.	244	124	9	10
Schenectady, N. Y.	26	21	—	1	Little Rock, Ark.	61	28	3	6
Scranton, Pa.	46	30	1	3	New Orleans, La.	127	62	2	1
Syracuse, N. Y.	108	67	7	2	Oklahoma City, Okla.*	89	51	3	3
Trenton, N. J.	42	26	—	3	San Antonio, Tex.	138	75	4	4
Utica, N. Y.	22	17	1	—	Shreveport, La.	62	37	2	5
Yonkers, N. Y.	27	19	1	—	Tulsa, Okla.	84	60	—	8
EAST NORTH CENTRAL	2,401	1,331	103	74	MOUNTAIN	545	306	18	18
Akron, Ohio	54	29	5	—	Albuquerque, N. Mex.	63	32	3	5
Canton, Ohio	41	23	1	4	Colorado Springs, Colo.	34	22	—	4
Chicago, Ill.	642	347	31	15	Denver, Colo.	138	78	1	3
Cincinnati, Ohio	170	84	6	5	Las Vegas, Nev.	16	4	—	—
Cleveland, Ohio	199	106	10	2	Ogden, Utah	13	5	1	2
Columbus, Ohio	90	41	4	3	Phoenix, Ariz.	112	65	2	—
Dayton, Ohio	99	62	3	2	Pueblo, Colo.	20	15	2	3
Detroit, Mich.	313	153	6	8	Salt Lake City, Utah	78	45	7	1
Evansville, Ind.	41	29	—	2	Tucson, Ariz.	71	40	2	—
Fort Wayne, Ind.	45	31	—	7	PACIFIC	1,843	1,169	47	5
Gary, Ind.	24	11	1	1	Berkeley, Calif.	29	19	—	1
Grand Rapids, Mich.	54	41	2	2	Fresno, Calif.	60	35	4	1
Indianapolis, Ind.	149	89	6	1	Glendale, Calif.	28	21	1	—
Madison, Wis.	32	16	1	7	Honolulu, Hawaii	54	32	2	2
Milwaukee, Wis.	121	74	4	2	Long Beach, Calif.	125	78	4	4
Peoria, Ill.	46	30	7	—	Los Angeles, Calif.	662	420	14	19
Rockford, Ill.	53	32	4	6	Oakland, Calif.	69	45	2	—
South Bend, Ind.	46	32	1	3	Pasadena, Calif.	32	25	—	—
Toledo, Ohio	127	67	10	2	Portland, Oreg.	141	92	3	2
Youngstown, Ohio	55	34	1	2	Sacramento, Calif.	56	26	2	2
WEST NORTH CENTRAL	780	486	28	41	San Diego, Calif.	129	79	5	3
Des Moines, Iowa	50	30	—	—	San Francisco, Calif.	186	119	3	9
Duluth, Minn.	25	20	1	1	San Jose, Calif.	48	31	—	—
Kansas City, Kans.	37	18	4	2	Seattle, Wash.	122	78	4	2
Kansas City, Mo.	122	74	8	1	Spokane, Wash.	67	50	3	5
Lincoln, Nebr.	20	15	—	3	Tacoma, Wash.	35	19	—	1
Minneapolis, Minn.	111	64	5	3	Total	12,494	7,249	448	495
Omaha, Nebr.	77	43	2	1	Expected Number	12,289	7,008	542	401
St. Louis, Mo.	220	141	4	21	Cumulative Total (includes reported corrections for previous weeks)	539,165	316,925	20,254	21,714
St. Paul, Minn.	78	55	1	2					
Wichita, Kans.	40	26	3	7					

† Delayed report for week ending October 13, 1973

\* Estimate based on average percent of divisional total

**TYPHOID FEVER — Continued**

the States of Guanajuato and Querétaro, experienced typhoid epidemics. Both outbreaks were caused by the epidemic strain and together resulted in fewer than 150 cases.

In 1 of the 2 outbreaks, *S. typhi* was isolated from drinking water kept in a clay storage container in a patient's home. In water samples from other homes, several isolates of organisms identified as *Salmonella spp.*, not *S. typhi*, were also recovered. Analysis of water taken directly from faucets, however, showed no bacterial contamination. No common source of infection was recognized in this epidemic, but cultural patterns of water use suggest that water may have been a vehicle of transmission in several cases.

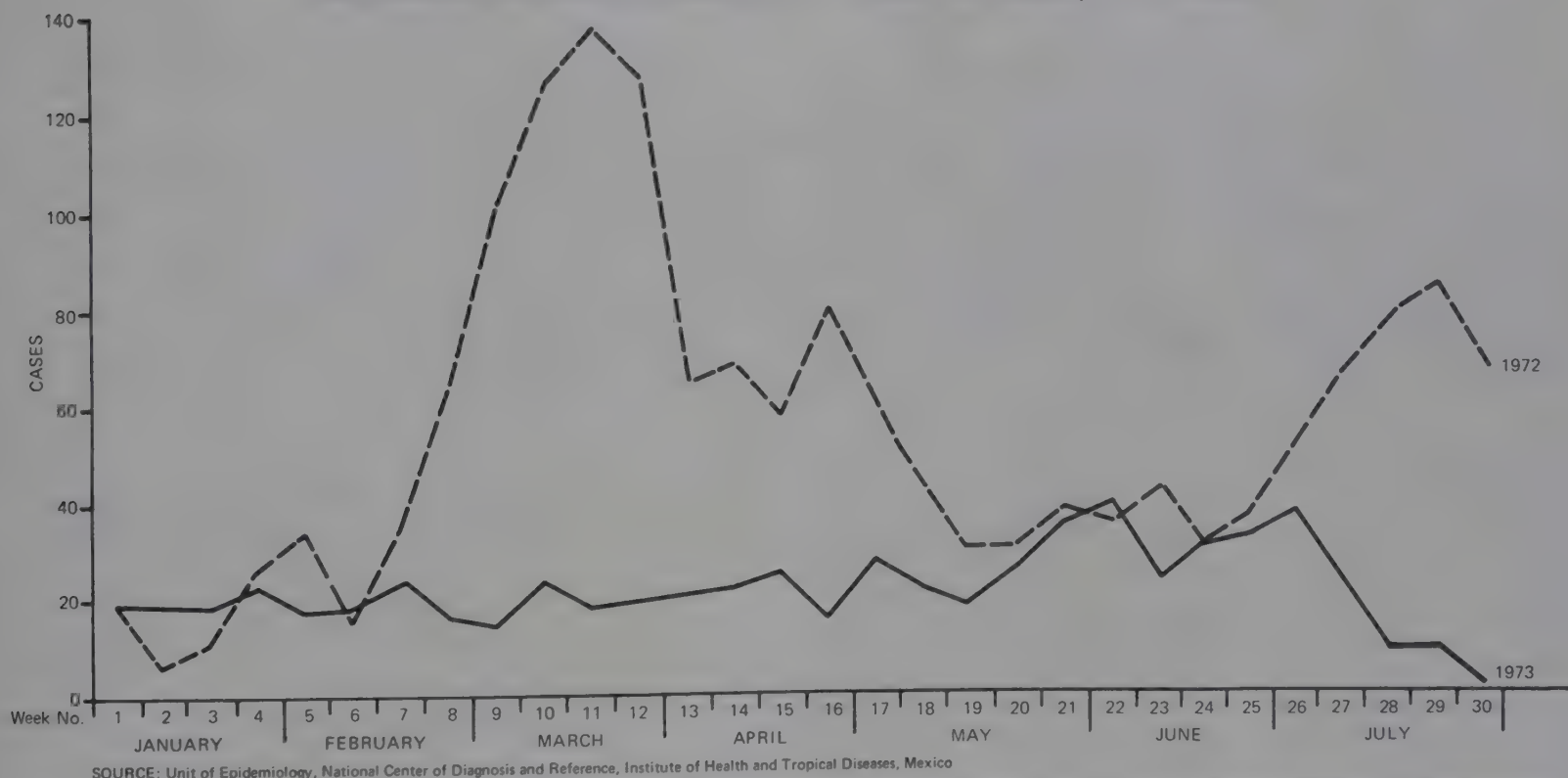
**Mexico City**

Between January and June 1972, surveillance of admissions to 7 hospitals in the metropolitan area of Mexico City revealed 1,479 confirmed typhoid cases compared with 667 cases for the same period in 1973. The weekly average of cases recorded during the first half of 1973 was 22, with the greatest number of patients (40) admitted in the 22nd week. The 5- to 14-year and 15- to 24-year age groups accounted for 42% and 26% of the 1973 cases, respectively. The 4 sanitary districts with the highest attack rates in 1973 (ranging from 8.6 to 12.4 cases per 100,000 population) were in the eastern and central portions of Mexico City.

Through the first 6 months of 1973, the number of hospitalized cases of typhoid fever remained fairly low compared with the number recorded in 1972, which showed a large peak in March (Figure 1). The relatively stable number of cases now being seen suggests a mixture of cases caused by both epidemic and endemic strains and appears to indicate an abatement of the typhoid epidemic that began early in 1972.

A massive vaccination program was conducted jointly by the Directorate General of Health, Secretariat of Health and Assistance, and the Department of Preventive Medicine, Mexican Institute of Social Security (I.M.S.S.) during the summer months of 1973, primarily in June and July; 4,750,000 first doses of typhoid vaccine were administered to a target population of individuals over 5 years of age. (Reported by Abel Gonzalez Cortes, M.D., Jesus Guzman Bahena, M.D., Carlos Calderon de la Barca, Unit of Epidemiology, David Bessudo M., M.Sc., Laboratory of Enterobacteriology, National Diagnosis and Reference Center, Institute of Health and Tropical Diseases, Directorate General of Investigation in Public Health, S.S.A., Mexico; Enrique Verduzco G., M.D., Department of Preventive Medicine, Miguel Terminel V., M.D., Hospital of Infectious Diseases, La Raza Medical Center, Luis Landa, M.D., General Hospital of the National Medical Center, Mexican Institute of Social Security, Mexico.)

Figure 1  
CASES OF TYPHOID FEVER, BY WEEK OF ONSET  
METROPOLITAN AREA OF MEXICO CITY — FIRST 30 WEEKS, 1972 AND 1973



**SURVEILLANCE SUMMARY**  
**HUMAN PSITTACOSIS — United States, 1972**

Seventeen states reported 38 human cases of psittacosis with onsets in 1972 to CDC. In addition, 3 cases with onsets in late 1971 were reported in 1972, increasing the 1971 case total from 33 to 36. Epidemiologic data was received on 33 of the 38 human cases recorded in 1972 and on all of the late 1971 cases.

Reports were obtained from all 50 States and Puerto Rico. Of the states reporting cases in 1972, 8 reported an increase over 1971, 4 reported a decrease, and 5 reported no change in the number of cases over the previous year. Con-

necticut reported the largest number of cases (6), followed by Texas (5), California (4), and Kansas (4).

Of the 32 cases for which the date of onset was known, most (5 each) occurred in March and July. However, there was no apparent seasonal variation in the onset of the disease, as almost equal numbers of cases occurred in every quarter of the year.

Of the 33 cases for which age and sex were known, 29 were in adults, and the remaining 4 were in children ages 2, 8, 9, and 9½ years. Fifteen cases occurred in males, 18 in females.

## PSITTACOSIS — Continued

Parakeets were the most probable source of infection in 10 cases (30%), while pigeons accounted for 6 cases (18%). A total of 16 cases occurred in persons who did not own birds, 10 of whom were exposed to birds either at work or in

their neighborhoods; in 6 cases no known exposure was reported. Four other cases occurred in pet shop employees whose most probable exposure was at the shop.  
(Reported by the Office of Veterinary Public Health Services, Bureau of Epidemiology, CDC.)

INTERNATIONAL NOTES  
QUARANTINE MEASURES

The following changes should be made in the "Supplement — Vaccination Certificate Requirements for International Travel," MMWR, Vol. 22, No. 17:

## Egypt

Smallpox — delete code I > 1 year and insert code I > 3 months.

## Iran

Cholera — in the note insert: Europe: Italy; Africa: Tunisia.

## Saudi Arabia

Cholera — delete all information. Insert Code 1 and the following:

During the period 27 October 1973 to 23 January 1974 (season of periodic mass congregations):

- (a) All arrivals from non-infected and/or non-endemic countries are required to possess a certificate of vaccination showing a single dose administered not

less than 1 week and not more than 3 months prior to arrival into Saudi Arabia.

- (b) All arrivals from countries any parts of which are infected or endemic are required to possess: (i) a certificate of vaccination showing a single dose administered not less than 1 week and not more than 3 months prior to arrival into Saudi Arabia; (ii) a certificate showing that, prior to their arrival in Saudi Arabia, they have spent 5 days in a cholera-free area in their countries which should be designated (located) by health authorities and notified in advance to Saudi Arabia Health Authorities (Time spent on board a safe vessel may be considered as a period spent in a cholera-free area provided no case appears on board.); (iii) a certificate from local health authorities showing that arrivals have taken adequate doses of tetracycline or any substitute antibiotic for 4 subsequent days immediately before they depart the local infected area or during their stay in the cholera-free area.

The Morbidity and Mortality Weekly Report, circulation 36,000, is published by the Center for Disease Control, Atlanta, Ga.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to: Center for Disease Control  
Attn: Editor  
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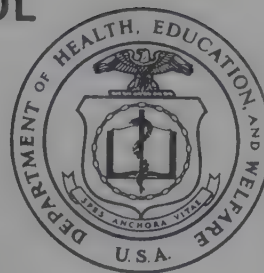
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# Marbidity and Mortality



Vol. 22, No. 43

WEEKLY  
REPORTFor  
Week Ending

October 27, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE

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## EPIDEMIOLOGIC NOTES AND REPORTS

## PROBABLE CHLOROQUINE-RESISTANT

## PLASMODIUM FALCIPARUM MALARIA — New York

On approximately August 25, 1973, a 31-year-old anthropologist from New York had onset of fever, rigors, and night sweats. He was admitted to a local hospital; physical examination revealed a temperature of 103.6°F. but was otherwise unremarkable. Blood smears showed no malaria parasites. A tentative diagnosis of typhoid fever was made, and the patient was started on ampicillin.

Over the next 2 days, the patient made no clinical improvement, and laboratory findings were consistent with disseminated intravascular coagulation. After 8 negative peripheral blood smears, *Plasmodium falciparum* organisms were identified at a density of 15,000 per cu mm. The patient received the standard total dose of 1.5 gm chloroquine base but did not improve. Repeat smears showed a parasite count of 100,000 per cu mm, and treatment was

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changed to quinine, pyrimethamine, and sulfadiazine. Within 36 hours, his fever had subsided, and the parasite count had decreased dramatically.

Epidemiologic investigation revealed that on August 21, 1973, the patient had returned from a 3-week visit in Surinam restricted to an area on the Marowijne River 50 miles from the coast. He had lived with the natives who used chloroquine-containing salt supplied through the national malaria control program but had taken no other medications.

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	43rd WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 43 WEEKS		
	October 27, 1973	October 28, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis . . . . .	92	140	136	3,872	3,437	3,707
Brucellosis . . . . .	2	3	3	158	159	172
Chickenpox . . . . .	601	895	— — —	147,747	117,560	— — —
Diphtheria . . . . .	2	6	3	153	90	150
Encephalitis, primary:						
Arthropod-borne and unspecified . . . . .	33	40	40	1,264	912	1,198
Encephalitis, post-infectious . . . . .	4	3	3	240	237	297
Hepatitis, serum (Hepatitis B) . . . . .	157	160	152	6,623	7,495	5,991
Hepatitis, infectious (Hepatitis A) . . . . .	861	925	1,049	42,352	45,320	45,320
Malaria . . . . .	3	10	49	209	751	2,553
Measles (rubeola) . . . . .	82	156	296	24,768	27,830	27,830
Meningococcal infections, total . . . . .	17	19	34	1,161	1,118	2,039
Civilian . . . . .	17	19	25	1,136	1,074	1,826
Military . . . . .	—	—	2	25	44	207
Mumps . . . . .	760	626	1,161	58,808	60,031	82,240
Rubella (German measles) . . . . .	128	184	271	26,654	22,362	45,452
Tetanus . . . . .	1	2	2	77	98	104
Tuberculosis, new active . . . . .	619	746	— — —	26,005	28,266	— — —
Tularemia . . . . .	5	1	1	139	113	128
Typhoid fever . . . . .	7	5	13	568	303	303
Typhus, tick-borne (Rky. Mt. spotted fever) . . . . .	12	8	2	613	503	387
Venereal Diseases:						
Gonorrhea . . . . .	16,773	15,124	— — —	681,945	620,534	— — —
Syphilis, primary and secondary . . . . .	493	556	— — —	21,274	20,777	— — —
Rabies in animals . . . . .	39	62	49	2,906	3,466	2,881

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax: . . . . .	1	Poliomyelitis, total: . . . . .	6
Botulism: . . . . .	16	Paralytic: . . . . .	4
Congenital rubella syndrome: * Colo.-1 . . . . .	28	Psittacosis: . . . . .	20
Leprosy: Calif.-1 . . . . .	103	Rabies in man: . . . . .	1
Leptospirosis: . . . . .	28	Trichinosis: . . . . .	72
Plague: . . . . .	2	Typhus, murine: . . . . .	29

\* Delayed reports: Congenital rubella syndrome: Ariz. delete 1

**MALARIA — Continued**

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**Editorial Note**

The sensitivity of this strain of *P. falciparum* to chloroquine phosphate was not tested. Nonetheless, the rising parasitemia during chloroquine therapy suggests this is a case of chloroquine-resistant *falciparum* malaria.

In the Western Hemisphere, *P. falciparum* malaria resistant to 4-amino-quinolines has been reported in most of South America east of the Andes, in Colombia on both the Atlantic and Pacific coasts, and in Central America; however, not all *P. falciparum* strains found in these areas are resistant, nor is *P. falciparum* the most common species in South America. Chloroquine resistance has been previously demonstrated in *P. falciparum* in 1 location in Surinam in 1972. Resistant strains are widespread in southeast Asia, but none

have been documented on the Indian subcontinent or in Africa (1). Resistance to 4-amino-quinolines has not been seen in other species (1).

The World Health Organization recommends several methods for documenting 4-amino-quinoline resistance (2,3). Any case of suspected chloroquine-resistant *P. falciparum* malaria acquired in Africa or on the Indian subcontinent should be reported immediately to local or state health authorities.

**References**

1. Chemotherapy of malaria and resistance to antimalarials. WHO Technical Report Series No. 529, 1973
2. Rieckmann KH, McNamara JV, Frischer A, *et al*: Effects of chloroquine, quinine, and cycloquanil upon the maturation of asexual erythrocytic forms of two strains of *Plasmodium falciparum* *in vitro*. Amer J Trop Med Hyg 17:661, 1968
3. Rieckmann KH: Determination of the drug sensitivity of *Plasmodium falciparum*. JAMA 217(5):573-578, 1971

**RICKETTSIAL DISEASE — Nebraska, South Dakota****Rocky Mountain spotted fever**

*Case 1.* On May 31, 1973, a 9-year-old boy from Vertigre, Nebraska, became ill with rash and fever; over the next 3 days, these symptoms persisted (temperature to 102°F.) and were accompanied by conjunctivitis, muscle aches, and joint pains. The rash was generalized and present on the child's palms and soles; lymph nodes were enlarged in the cervical area.

The patient gave a history of having received multiple tick bites within 2 weeks prior to onset of illness, and a presumptive diagnosis of Rocky Mountain spotted fever (RMSF) was made. The patient was started on Terramycin\*, 250 mg 3 times a day. He made a full recovery and was discharged on June 6. Paired serum specimens collected on June 3 and July 3, 1973, revealed positive complement fixation reactions for RMSF at titers of 1:8 and 1:24, respectively.

*Case 2.* A 15-year-old boy from West Point, Nebraska, (in the northeast corner of the state) had onset of fever, headache, malaise, and rash on June 10, 1973. The rash was maculopapular and appeared initially on the arms and legs and later on the trunk; by June 20, the rash was purpuric. These symptoms coupled with a history of a recent tick bite led to a presumptive diagnosis of RMSF. Tetracycline therapy was initiated, and the patient recovered completely. A series of 3 serum samples collected in late June and July 1973 were negative, 1:64, and 1:256, respectively, on complement fixation testing for RMSF.

**Typhus**

*Case 3.* An 11-year-old girl from Lincoln, Nebraska, developed an illness characterized by fever, headache, stupor, malaise, myalgia, splenomegaly, and a petechial rash on May 17, 1973. She was hospitalized on May 23, and on admission the rash was noted to involve the palms and soles. The child had received a tick bite on May 10, and a presumptive diagnosis of RMSF was made. Paired serum specimens obtained on May 23 and June 4 had proteus OX19 agglutination titers of 1:100 and 1:320, respectively. Chloramphenicol therapy was administered and was followed by complete recovery.

\*Inclusion of trade names does not imply endorsement by the Public Health Service or the U.S. Department of Health, Education, and Welfare.

Subsequent complement fixation tests on the serum specimens indicated recent infection with a member of the typhus rather than the spotted fever group. To ensure that this interpretation was not the result of cross reactions, a third serum specimen was collected from the patient while she was visiting in southern California and tested; again the results indicated recent infection with an organism of the typhus group (Table 1).

A more detailed history obtained after this discovery revealed that from April 22 to 28, 1973, the patient had accompanied her stepfather on a trip to McAllen, Texas. This area is known to be endemic for murine typhus and was the probable source of exposure (1). The intervening period of time between this trip and the onset of symptoms was longer than the usual incubation period of murine typhus (8-12 days); however, the child's dog (terrier-chihuahua cross) went along on the trip and may have picked up infected rat fleas and served as a transient carrier until sometime in early May. Cat fleas have also been implicated in the transmission of typhus (1). No case of murine typhus acquired in Nebraska has been reported.

*Case 4.* A 51-year-old man from Edgemont, South Dakota, was admitted to Chadron Community Hospital in Chadron, Nebraska, on May 30, 1973, with the chief complaints of fever and a generalized rash of 1 day's duration. History revealed that the patient had had a flu-like prodrome for the previous 10 days. On admission, he exhibited a generalized maculopapular rash, dark red in color, and a temperature of over 105°F. Febrile agglutinins revealed a proteus OX19 titer of 1:320. A presumptive diagnosis of RMSF was made, and the patient was treated with Loridine\* intramuscularly and Vibromycin\* orally. Except for weakness, his symptoms subsided within 7 days.

Two additional serum specimens were collected, and the results indicated an infection with 1 of the typhus organisms (Table 2). No recent travel from the South Dakota-Wyoming-Nebraska junction area into areas having high rates of murine typhus was noted.

This serologic picture is compatible with recrudescent epidemic typhus (Brill-Zinsser disease) since there was no history of recent travel into an area reporting epidemic

(Continued on page 363)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING OCTOBER 27, 1973 AND OCTOBER 28, 1972 (43rd WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
				1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES .....	92	2	601	2	153	33	40	4	157	861	925
NEW ENGLAND .....	6	-	67	-	3	-	-	-	2	55	56
Maine * .....	-	-	2	-	-	-	-	-	-	2	7
New Hampshire * .....	-	-	26	-	-	-	-	-	-	3	10
Vermont * .....	-	-	3	-	-	-	-	-	-	8	4
Massachusetts .....	2	-	-	-	1	-	-	-	-	26	17
Rhode Island .....	3	-	25	-	2	-	-	-	1	7	8
Connecticut .....	1	-	11	-	-	-	-	-	1	9	10
MIDDLE ATLANTIC .....	10	-	6	-	-	4	-	1	23	80	138
Upstate New York .....	4	-	-	-	-	-	-	-	2	23	26
New York City * .....	1	-	6	-	-	1	-	-	-	9	22
New Jersey .....	2	-	NN	-	-	1	-	-	11	32	44
Pennsylvania .....	3	-	-	-	-	2	-	1	10	16	46
EAST NORTH CENTRAL .....	18	-	221	-	-	16	17	-	12	127	168
Ohio .....	8	-	18	-	-	2	12	-	1	11	49
Indiana * .....	2	-	24	-	-	9	1	-	-	-	10
Illinois .....	-	-	-	-	-	1	1	-	5	47	36
Michigan * .....	6	-	56	-	-	4	2	-	3	62	66
Wisconsin .....	2	-	123	-	-	-	1	-	3	7	7
WEST NORTH CENTRAL .....	6	1	119	-	7	5	1	-	3	39	29
Minnesota .....	6	-	-	-	-	1	-	-	-	4	7
Iowa * .....	-	1	113	-	-	-	-	-	2	1	4
Missouri .....	-	-	1	-	-	3	1	-	-	21	11
North Dakota .....	-	-	4	-	-	-	-	-	-	-	1
South Dakota .....	-	-	-	-	7	-	-	-	-	3	2
Nebraska .....	-	-	1	-	-	-	-	-	-	-	-
Kansas .....	-	-	-	-	-	1	-	-	1	10	4
SOUTH ATLANTIC .....	21	-	41	-	1	3	4	-	28	208	130
Delaware .....	-	-	-	-	-	-	-	-	1	3	5
Maryland .....	4	-	1	-	-	1	-	-	3	6	7
District of Columbia .....	3	-	2	-	-	-	-	-	-	1	1
Virginia .....	2	-	1	-	-	-	2	-	3	19	17
West Virginia .....	-	-	35	-	-	-	-	-	-	6	4
North Carolina .....	4	-	NN	-	-	2	1	-	5	20	23
South Carolina .....	-	-	2	-	-	-	-	-	-	22	24
Georgia .....	-	-	-	-	-	-	-	-	-	16	14
Florida .....	8	-	-	-	1	-	1	-	16	115	35
EAST SOUTH CENTRAL .....	9	-	13	-	1	-	2	3	11	77	56
Kentucky .....	1	-	11	-	-	-	-	-	1	21	18
Tennessee .....	1	-	NN	-	-	-	1	2	2	38	26
Alabama .....	7	-	2	-	1	-	-	1	8	17	9
Mississippi .....	-	-	-	-	-	-	1	-	-	1	3
WEST SOUTH CENTRAL .....	4	-	20	1	15	3	2	-	9	42	84
Arkansas * .....	-	-	-	-	-	-	-	-	-	-	6
Louisiana .....	1	-	NN	-	-	2	-	-	6	24	9
Oklahoma .....	1	-	-	-	-	-	-	-	-	16	18
Texas .....	2	-	20	1	15	1	2	-	3	2	51
MOUNTAIN .....	-	1	11	-	42	1	4	-	3	24	53
Montana .....	-	1	8	-	-	1	4	-	1	2	7
Idaho .....	-	-	-	-	-	-	-	-	-	2	4
Wyoming .....	-	-	-	-	-	-	-	-	-	-	6
Colorado .....	-	-	1	-	-	-	-	-	2	6	14
New Mexico .....	-	-	2	-	25	-	-	-	-	9	4
Arizona * .....	-	-	-	-	17	-	-	-	-	-	15
Utah .....	-	-	-	-	-	-	-	-	-	5	3
Nevada * .....	-	-	-	-	-	-	-	-	-	-	-
PACIFIC .....	18	-	103	1	84	1	10	-	66	209	211
Washington .....	2	-	103	-	75	-	3	-	7	18	14
Oregon .....	-	-	-	-	3	-	2	-	8	21	26
California .....	16	-	-	1	4	1	5	-	51	170	158
Alaska .....	---	---	---	---	2	---	-	---	---	---	-
Hawaii .....	---	---	---	---	-	---	-	---	---	---	13
Guam * .....	-	-	-	-	-	-	-	-	-	12	18
Puerto Rico .....	-	-	-	-	-	-	-	-	-	-	-
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-

\* Delayed reports: Aseptic meningitis: N.H.-2, Iowa 1  
Chickenpox: Me. 1, Guam 8  
Encephalitis, primary: Me. 1, Mich.2

Hepatitis B: Me. 1, N.Y.C.-2, Ariz. 1, Guam 1  
Hepatitis A: Me. 7, Va. delete 1, N.Y.C. 14, Ind. delete 1,  
Mich. delete 2, Ark. 2, Ariz. 3, Nev. 29, Guam 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING OCTOBER 27, 1973 AND OCTOBER 28, 1972 (43rd WEEK) - Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	3	209	82	24,768	27,830	17	1,161	1,118	760	58,808	128	26,000
NEW ENGLAND .....	1	17	9	7,468	3,318	-	48	47	85	3,208	1	3,000
Maine *	-	-	-	67	247	-	1	4	10	361	-	-
New Hampshire *	-	-	1	892	356	-	7	3	-	197	-	-
Vermont .....	-	2	-	119	128	-	3	-	-	273	-	-
Massachusetts .....	-	7	2	3,961	761	-	13	21	17	930	-	2,000
Rhode Island .....	-	1	4	619	524	-	3	12	34	434	-	-
Connecticut .....	1	7	2	1,810	1,302	-	21	7	24	1,013	1	-
MIDDLE ATLANTIC .....	-	31	8	2,539	1,060	-	161	135	33	7,471	7	4,000
Upstate New York .....	-	17	-	811	129	-	58	32	NN	NN	-	-
New York City .....	-	2	1	922	371	-	31	40	10	4,622	2	-
New Jersey .....	-	5	7	442	497	-	39	26	3	1,527	3	3,000
Pennsylvania .....	-	7	-	364	63	-	33	37	20	1,322	2	-
EAST NORTH CENTRAL .....	2	29	40	8,689	11,281	3	156	163	213	14,982	49	6,000
Ohio .....	-	4	-	290	257	2	67	63	10	2,745	1	6,000
Indiana .....	-	3	4	661	1,277	-	4	12	103	1,383	1	9,000
Illinois .....	1	16	9	2,095	4,167	-	25	36	16	2,514	29	1,000
Michigan .....	1	6	11	4,413	2,038	1	44	44	46	4,107	10	1,800
Wisconsin .....	-	-	16	1,230	3,542	-	16	8	38	4,233	8	1,600
WEST NORTH CENTRAL .....	-	8	3	450	985	4	89	78	82	4,944	5	1,200
Minnesota .....	-	2	-	21	22	-	8	24	5	88	-	2,000
Iowa .....	-	1	1	279	689	2	21	5	48	3,020	4	2,000
Missouri .....	-	1	-	53	164	2	34	22	5	726	1	2,000
North Dakota .....	-	1	2	64	53	-	3	-	-	69	-	2,000
South Dakota .....	-	-	-	-	7	-	4	2	-	19	-	-
Nebraska .....	-	1	-	6	23	-	10	9	6	161	-	1,000
Kansas .....	-	2	-	27	27	-	9	16	18	861	-	-
SOUTH ATLANTIC .....	-	33	5	1,258	2,227	3	197	251	82	6,869	8	2,200
Delaware .....	-	-	-	9	51	-	1	1	2	274	-	-
Maryland .....	-	5	-	13	15	1	27	37	3	642	-	-
District of Columbia .....	-	1	-	8	2	-	4	11	2	137	-	-
Virginia .....	-	8	-	421	66	-	38	56	1	715	-	6,000
West Virginia .....	-	-	-	218	285	-	5	8	55	2,356	1	3,000
North Carolina .....	-	7	-	4	37	-	42	30	NN	NN	-	2,000
South Carolina .....	-	1	-	64	216	1	13	20	1	357	-	8,000
Georgia .....	-	3	-	152	182	-	22	18	-	32	-	1,000
Florida .....	-	8	5	369	1,373	1	45	70	18	2,356	7	9,000
EAST SOUTH CENTRAL .....	-	13	1	615	1,066	2	106	87	77	4,904	12	1,360
Kentucky .....	-	8	1	380	535	1	37	28	23	1,474	-	4,000
Tennessee .....	-	-	-	165	193	-	42	28	38	2,281	3	55,000
Alabama .....	-	5	-	12	153	-	15	17	9	680	8	19,000
Mississippi .....	-	-	-	58	185	1	12	14	7	469	1	21,000
WEST SOUTH CENTRAL .....	-	12	2	707	1,566	2	177	135	64	4,062	7	1,480
Arkansas *	-	-	-	70	13	-	13	10	-	387	-	11,000
Louisiana .....	-	2	-	87	94	-	42	41	-	85	-	9,000
Oklahoma .....	-	2	-	55	10	-	31	8	6	452	-	17,000
Texas .....	-	8	2	495	1,449	2	91	76	58	3,138	7	1,090
MOUNTAIN .....	-	10	3	736	1,914	-	33	29	17	2,544	5	2,410
Montana .....	-	1	-	17	16	-	7	5	5	248	-	50,000
Idaho .....	-	-	-	256	148	-	4	8	4	114	-	4,000
Wyoming .....	-	-	-	81	51	-	-	1	3	427	-	-
Colorado .....	-	2	1	106	532	-	11	5	-	490	1	1,550
New Mexico .....	-	2	2	126	126	-	3	3	2	982	2	20,000
Arizona .....	-	4	-	21	885	-	4	1	-	140	-	15,000
Utah .....	-	1	-	128	155	-	2	5	3	134	2	75,000
Nevada .....	-	-	-	1	1	-	2	1	-	9	-	-
PACIFIC .....	-	56	11	2,306	4,413	3	194	193	107	9,824	34	3,920
Washington .....	-	3	4	1,027	982	-	20	17	26	1,578	10	700
Oregon .....	-	4	-	461	133	-	16	14	22	1,849	4	794
California .....	-	46	7	734	3,187	3	151	151	59	5,349	20	2,391
Alaska .....	---	2	---	65	13	---	7	8	---	772	---	9,000
Hawaii .....	---	1	---	19	98	---	-	3	---	276	---	26,000
Guam *	-	-	-	50	16	-	-	13	-	25	-	13,000
Puerto Rico .....	-	-	29	1,909	785	-	8	4	10	783	-	33,000
Virgin Islands .....	-	-	-	7	3	-	-	2	-	24	-	2,000

\*Delayed Reports: Measles: N.H. 6  
Mumps: Me. 3, Ark. 2, Guam 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING OCTOBER 27, 1973 AND OCTOBER 28, 1972 (43rd WEEK) – Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
									GONOR- RHEA	SYPHILIS (Pri. & Sec.)		
		Cumulative 1973	1973		Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	1973	1973
UNITED STATES .....	77	619	26,005	139	7	568	12	613	16,773	493	39	2,906
NEW ENGLAND .....	2	23	954	—	—	16	—	3	302	18	2	110
Maine .....	—	1	88	—	—	—	—	—	41	—	1	58
New Hampshire .....	—	2	47	—	—	—	—	—	15	—	—	36
Vermont .....	—	—	27	—	—	—	—	—	—	3	—	3
Massachusetts .....	—	18	504	—	—	14	—	2	—	11	—	6
Rhode Island .....	1	2	81	—	—	—	—	—	27	—	1	1
Connecticut * .....	1	—	207	—	—	2	—	1	219	4	—	6
MIDDLE ATLANTIC .....	7	106	5,108	—	—	56	1	34	2,236	118	1	47
Upstate New York .....	1	4	899	—	—	10	—	13	386	17	1	23
New York City .....	3	53	1,896	—	—	21	—	4	783	55	—	—
New Jersey .....	2	18	904	—	—	15	—	5	289	30	—	—
Pennsylvania .....	1	31	1,409	—	—	10	1	12	778	16	—	24
EAST NORTH CENTRAL .....	13	84	3,844	3	—	44	—	19	2,316	16	7	276
Ohio .....	3	40	1,151	—	—	18	—	14	688	6	—	32
Indiana .....	4	10	492	—	—	—	—	—	234	7	1	52
Illinois .....	3	10	1,153	1	—	10	—	5	419	—	—	69
Michigan .....	1	24	970	2	—	13	—	—	726	1	—	7
Wisconsin .....	2	—	78	—	—	3	—	—	249	2	6	116
WEST NORTH CENTRAL .....	6	34	1,096	16	—	24	3	24	907	23	16	915
Minnesota .....	—	8	135	—	—	4	1	2	205	5	4	337
Iowa .....	—	1	109	—	—	—	—	7	192	4	5	188
Missouri .....	5	20	520	15	—	12	1	8	239	11	—	89
North Dakota .....	1	—	36	—	—	—	—	—	18	—	1	137
South Dakota .....	—	1	77	—	—	1	1	1	47	—	—	81
Nebraska .....	—	1	71	—	—	1	—	2	107	2	—	3
Kansas .....	—	3	148	1	—	6	—	4	99	1	6	80
SOUTH ATLANTIC .....	17	124	5,164	17	2	248	4	304	4,228	161	1	260
Delaware .....	—	—	82	—	—	—	—	8	38	—	—	3
Maryland .....	—	9	566	6	1	9	—	14	431	10	—	14
District of Columbia .....	—	13	248	—	—	—	—	—	356	7	—	—
Virginia .....	2	8	688	4	—	3	1	61	363	20	1	79
West Virginia .....	1	6	247	—	1	10	—	4	47	—	—	22
North Carolina .....	—	18	839	2	—	5	3	138	617	25	—	13
South Carolina .....	2	16	409	—	—	6	—	32	352	19	—	5
Georgia .....	2	19	844	3	—	3	—	46	1,046	22	—	85
Florida .....	10	35	1,241	2	—	212	—	1	978	58	—	39
EAST SOUTH CENTRAL .....	8	79	2,341	10	2	41	1	110	1,149	23	2	374
Kentucky .....	1	6	520	1	—	10	—	—	210	12	—	198
Tennessee .....	5	23	733	7	2	14	—	52	470	9	2	133
Alabama .....	2	36	653	—	—	10	1	25	173	—	—	42
Mississippi .....	—	14	435	2	—	7	—	33	296	2	—	1
WEST SOUTH CENTRAL .....	13	58	2,673	88	—	26	3	103	2,672	40	4	510
Arkansas .....	1	7	330	60	—	5	—	20	131	1	1	108
Louisiana .....	4	—	380	1	—	6	—	—	512	4	1	42
Oklahoma .....	4	5	226	20	—	2	3	74	203	3	1	146
Texas .....	4	46	1,737	7	—	13	—	9	1,826	32	1	214
MOUNTAIN .....	—	19	878	4	2	14	—	8	651	28	—	50
Montana .....	—	1	42	—	—	—	—	1	20	—	—	10
Idaho .....	—	—	30	—	—	1	—	2	32	—	—	—
Wyoming .....	—	—	24	—	—	1	—	1	5	—	—	—
Colorado .....	—	5	171	—	—	2	—	1	215	1	—	—
New Mexico .....	—	10	183	1	2	4	—	3	86	26	—	7
Arizona * .....	—	3	340	—	—	6	—	—	183	1	—	29
Utah .....	—	—	38	2	—	—	—	—	79	—	—	4
Nevada .....	—	—	50	1	—	—	—	—	31	—	—	—
PACIFIC .....	11	92	3,947	1	1	99	—	8	2,312	66	6	364
Washington * .....	8	10	307	—	—	7	—	5	330	3	—	9
Oregon .....	—	3	209	—	—	2	—	2	101	1	—	8
California .....	8	79	3,109	1	1	85	—	1	1,881	62	6	339
Alaska .....	—	---	44	—	---	4	---	—	---	---	---	8
Hawaii * .....	—	---	278	—	---	1	---	—	---	---	---	—
Guam *	—	—	35	—	—	—	—	—	—	—	—	—
Puerto Rico .....	4	9	417	—	1	9	—	—	37	1	—	46
Virgin Islands .....	—	—	2	—	—	—	—	—	2	3	—	—

\* Delayed reports: Tetanus: Wash. delete 1  
TB: Hawaii delete 40  
Typhoid: Ariz. 2

Gonorrhea: Guam 11  
Rabies: Conn. 4, Ariz. 1

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING OCTOBER 27, 1973

Week No.

43

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	751	475	22	49	SOUTH ATLANTIC	1,141	583	45	41
Boston, Mass.	235	135	9	14	Atlanta, Ga.	110	55	4	1
Bridgeport, Conn.	44	25	1	2	Baltimore, Md.	169	100	5	3
Cambridge, Mass.	39	31	1	6	Charlotte, N. C.	63	36	1	—
Fall River, Mass.	34	25	1	1	Jacksonville, Fla.	124	62	5	1
Hartford, Conn.	69	40	2	4	Miami, Fla.	125	60	4	1
Lowell, Mass.	22	14	—	2	Norfolk, Va.	69	28	6	6
Lynn, Mass.	22	19	—	4	Richmond, Va.	93	45	1	10
New Bedford, Mass.	32	22	—	1	Savannah, Ga.	30	14	3	2
New Haven, Conn.	58	38	1	2	St. Petersburg, Fla.	79	57	2	3
Providence, R. I.	57	34	5	6	Tampa, Fla.	65	32	6	5
Somerville, Mass.	9	7	—	1	Washington, D. C.	133	49	4	6
Springfield, Mass.	41	23	1	4	Wilmington, Del.	81	45	4	3
Waterbury, Conn.	34	22	—	1	EAST SOUTH CENTRAL	575	302	35	30
Worcester, Mass.	55	40	1	1	Birmingham, Ala.	108	46	8	2
MIDDLE ATLANTIC	2,916	1,796	76	137	Chattanooga, Tenn.	37	19	2	6
Albany, N. Y.	58	33	1	—	Knoxville, Tenn.	37	22	—	1
Allentown, Pa.	22	9	—	2	Louisville, Ky.	79	40	9	5
Buffalo, N. Y.	143	86	6	4	Memphis, Tenn.	141	77	11	—
Camden, N. J.	41	25	—	1	Mobile, Ala.	50	32	—	3
Elizabeth, N. J.	26	21	—	—	Montgomery, Ala.	28	16	3	5
Erie, Pa.	28	20	1	1	Nashville, Tenn.	95	50	2	8
Jersey City, N. J.	51	33	3	3	WEST SOUTH CENTRAL	1,203	634	72	30
Newark, N. J.	72	34	8	2	Austin, Tex.	34	21	4	—
New York City, N. Y.†	1,562	963	35	66	Baton Rouge, La.	51	33	3	4
Paterson, N. J.	27	17	—	—	Corpus Christi, Tex.	15	3	2	—
Philadelphia, Pa.	304	177	10	27	Dallas, Tex.	161	79	12	4
Pittsburgh, Pa.	172	96	4	15	El Paso, Tex.	39	16	3	3
Reading, Pa.	31	26	—	—	Fort Worth, Tex.	92	54	3	—
Rochester, N. Y.	104	70	5	6	Houston, Tex.	228	109	9	5
Schenectady, N. Y.	27	19	—	—	Little Rock, Ark.	62	32	7	—
Scranton, Pa.	51	30	2	—	New Orleans, La.	174	91	11	4
Syracuse, N. Y.	92	59	1	6	Oklahoma City, Okla.*	84	48	5	1
Trenton, N. J.	47	36	—	2	San Antonio, Tex.	138	80	9	2
Utica, N. Y.	31	22	—	—	Shreveport, La.	63	34	3	3
Yonkers, N. Y.	27	20	—	2	Tulsa, Okla.	62	34	1	4
EAST NORTH CENTRAL	2,478	1,438	99	84	MOUNTAIN	558	322	25	29
Akron, Ohio	58	38	4	—	Albuquerque, N. Mex.	69	43	4	6
Canton, Ohio	44	33	1	3	Colorado Springs, Colo.	25	12	1	3
Chicago, Ill.	641	345	26	19	Denver, Colo.	138	89	3	11
Cincinnati, Ohio	165	98	7	5	Las Vegas, Nev.	32	10	1	—
Cleveland, Ohio	181	98	6	5	Ogden, Utah	23	12	—	1
Columbus, Ohio	139	77	7	5	Phoenix, Ariz.	152	79	9	6
Dayton, Ohio	99	62	4	1	Pueblo, Colo.	16	14	—	—
Detroit, Mich.	363	185	12	7	Salt Lake City, Utah	39	25	4	1
Evansville, Ind.	47	36	1	3	Tucson, Ariz.	64	38	3	1
Fort Wayne, Ind.	55	26	2	5	PACIFIC	1,534	915	43	31
Gary, Ind.	31	14	—	—	Berkeley, Calif.	15	9	—	—
Grand Rapids, Mich.	51	40	3	5	Fresno, Calif.	65	29	4	—
Indianapolis, Ind.	147	94	13	4	Glendale, Calif.	24	19	—	2
Madison, Wis.	25	14	4	3	Honolulu, Hawaii	65	28	2	3
Milwaukee, Wis.	116	71	1	—	Long Beach, Calif.	71	38	—	1
Peoria, Ill.	48	34	4	—	Los Angeles, Calif.	468	282	8	8
Rockford, Ill.	51	33	1	12	Oakland, Calif.	81	52	3	—
South Bend, Ind.	46	21	—	4	Pasadena, Calif.	26	18	1	—
Toledo, Ohio	105	79	1	1	Portland, Oreg.	127	84	1	2
Youngstown, Ohio	66	40	2	2	Sacramento, Calif.	51	25	—	1
WEST NORTH CENTRAL	795	485	29	21	San Diego, Calif.	110	73	2	—
Des Moines, Iowa	56	36	1	—	San Francisco, Calif.	166	93	7	4
Duluth, Minn.	31	21	1	4	San Jose, Calif.	52	37	—	2
Kansas City, Kans.	27	10	6	1	Seattle, Wash.	126	70	13	2
Kansas City, Mo.	125	76	5	1	Spokane, Wash.	54	35	2	3
Lincoln, Nebr.	41	36	1	3	Tacoma, Wash.	33	23	—	3
Minneapolis, Minn.	90	54	—	1	Total	11,951	6,950	446	452
Omaha, Nebr.	80	54	4	1	Expected Number	12,379	7,079	542	407
St. Louis, Mo.	216	126	8	7	Cumulative Total (includes reported corrections for previous weeks)	551,241	323,977	20,693	22,181
St. Paul, Minn.	66	45	1	1					
Wichita, Kans.	63	27	2	2					

† Delayed report for week ending October 20, 1973.

\* Estimate based on average percent of divisional total.

## RICKETTSIAL DISEASE – Continued

typhus nor presence of body lice on the patient. The patient reported having had a febrile illness compatible with epidemic typhus in Liège, Belgium, during his military service with the U.S. Army in 1944.

(Reported by Robert Scherer, M.D., John Thomas, M.D., Eugene R. Schwenke, M.D., Allen Alderman, M.D., attending physicians, West Point, Omaha, Lincoln, and Chadron, Nebraska; George Underwood, M.D., Health Officer, Lincoln-Lancaster County Health Department; Paul A. Stoesz, M.D., State Epidemiologist, Nebraska Department of Health; W.F. Stanage, M.D., C.B. McVay, M.D., attending physicians, Yankton, South Dakota; Robert S. Westaby, M.D., State Epidemiologist, South Dakota State Department of Health; James Chin, M.D., State Epidemiologist, California State Department of Health; and 2 EIS Officers.)

## Editorial Note

Rocky Mountain spotted fever occurs in the United States in a broad arc extending from the Rocky Mountains to the South Atlantic seaboard. The incidence of the disease is greater than 0.5 per 100,000 population in Montana, Wyoming, Oklahoma, Tennessee, North Carolina, and Virginia but over 95% of reported cases now occur east of the Mississippi. The case-fatality ratio in the United States remains at about 5%, and fatalities appear to be associated with delay in initiation of appropriate treatment (1). Treatment should be started presumptively as in the cases reported here and the diagnosis subsequently confirmed by the clinical course and laboratory tests. Confusion with other rickettsial diseases is possible and as seen here may only be recognized if the laboratory tests point to the correct diagnosis. Case 3 and 4 show that murine typhus and recrudescent epidemic typhus (Brill-Zinsser disease) may occur in any part of the United States even though the exposure occurred elsewhere (2,3).

Table 1

Complement Fixation Titers in 3 Serum Specimens from Case #3  
Lincoln, Nebraska – May-July, 1973

	S1 (May 23)	S2 (June 4)	S3 (July ?10)
Rocky Mountain spotted fever	<1:8 <1:8	1:8 1:256	N.P.* 1:8
Murine typhus	<1:8 <1:8	1:256 1:256	N.P. 1:128

\*not performed

Table 2

Complement Fixation Titers in 3 Serum Specimens from Case #4  
Chadron, Nebraska – May-July, 1973

	S1 (May 30)	S2 (June 21)	S3 (July 7)
Epidemic typhus	1:128	1:1024	1:512
Murine typhus	1:48	1:1024	1:256
Rocky Mountain spotted fever	1:12	1:32	1:16

## References

1. Hattwick MAW, Peters AH, Gregg MB, Hanson B: Surveillance of Rocky Mountain spotted fever. JAMA 225:1338-1343, 1973
2. Murray ES, Snyder JC: Brill-Zinsser disease: The interepidemic reservoir of epidemic louse-borne typhus fever. Presented at the Sixth International Congress of Microbiology in Rome, September 1953
3. Older JJ: The epidemiology of murine typhus in Texas, 1969. JAMA 214:2011-2017, 1970

## INTERNATIONAL NOTES

## VENEZUELAN EQUINE ENCEPHALITIS – Ecuador, Peru

In March 1973, an outbreak of Venezuelan equine encephalitis (VEE) occurred south of Guayaquil, Ecuador. VEE virus subtype I was isolated from the blood of a young adult and a child. Of 125 serum samples collected in the area, 7 had titers  $\geq 1:320$  by hemagglutination-inhibition tests. This is the third year since 1969 that VEE has been found in southern Ecuador.

In Peru, equine cases of VEE were reported in early January 1973, from Lambayeque, Chiclayo Province. Apparently, the disease spread from there both to the north and south; La Libertad, Pacasmayo Province, was the most affected. In that Province a reported 2,144 of an estimated 7,800 equines died. At the same time 3,814 humans received medical treatment for a clinical illness consistent with VEE virus infection. According to the 1972 census, the rural population of this Province was 19,975. Field surveillance indicated an infection rate of 30-40% for this population. In this Province, the epidemic was first reported in late January and the last cases in late March. Sporadic cases were still being reported from the department of Piura in early May.

From febrile humans and equines, 14 viruses were iso-

lated in suckling mice and identified by complement fixation tests. Three isolates from humans and 3 from equines have been confirmed as VEE virus strains at CDC. Preliminary results indicate that these and the isolates from Ecuador are all subtype I. This subtype has been isolated in VEE epizootics and epidemics which have occurred in Ecuador, Central America, Mexico, and the United States between 1969 and 1971.

According to Peruvian authorities, outbreaks of equine encephalitis were observed in the northernmost region of Peru, near Piura, in the late 1920s and early 1930s. Whether or not these were due to VEE is unknown, but the continual recurrence of VEE in the southern Ecuadorian-northern Peruvian border area suggests that this is an area for further studies.

(Reported by Dr. Ernesto Gutierrez V., Chief, Department of Virology, National Institute of Hygiene, Guayaquil, Ecuador; Dr. Jose Madalenoitia, Chief, Division of Viruses, Ministry of Health and the University of San Marcos, Lima, Peru; the Arbovirus Reference Section, Vectorborne Diseases Branch, Bureau of Laboratories, CDC.)

## Errata

Vol. 22, No. 39, p. 329

In "Table III. Cases of Notifiable Diseases: United States," column 3, "Tuberculosis (New Active), 1973," change the number of cases reported by Hawaii from 44 to 4.

Vol. 22, No. 41, p. 343

In the article "Diphtheria on a Navajo Indian Reserva-

tion — Arizona, New Mexico," the following persons were inadvertently omitted from the credits: Charlotte Lambert, Gallup Indian Health Service Hospital; H. Gilbert Crecelius, Ph.D., Director of Laboratories, Arizona State Department of Health; the Special Bacteriology Unit, Clinical Bacteriology Section, Bacteriology Branch, Bureau of Laboratories, and an Immunization Branch Public Health Advisor, CDC.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

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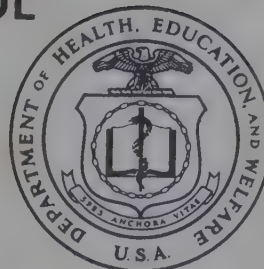


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# Morbidity and Mortality



U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE  
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## EPIDEMIOLOGIC NOTES AND REPORTS SPRAY ADHESIVES, BIRTH DEFECTS, AND CHROMOSOMAL DAMAGE

In late August 1973, the sale of certain spray adhesives was banned in the United States because of data from the University of Oklahoma suggesting that the use of such sprays might cause both birth defects and chromosomal damage (1). To test the possible association between spray adhesive use and birth defect occurrence, data concerning sales of certain sprays have been compared to local patterns of birth defects incidence in the metropolitan areas of Oklahoma City, Oklahoma, and Atlanta, Georgia, during the 4-year period 1970-1973. In neither area has any increase in incidence appeared either for all birth defects or for any particular birth defect category, despite 4- to 5-fold increases in spray adhesive sales (Figures 1 and 2). The figures demonstrate this lack of association both for total defects and for cases with multiple

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malformations. Incidence figures for Oklahoma City were derived from data recorded on birth certificates and for Atlanta from an ongoing hospital-based registry of newborn birth defects. The latter surveillance system has shown essentially stable malformation rates since its inception in October 1967. Through a survey of 173 women interviewed postpartum in metropolitan Atlanta, exposure to spray adhesives has been estimated to have occurred in about 5% of pregnant women. In Oklahoma City this proportion may have been

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

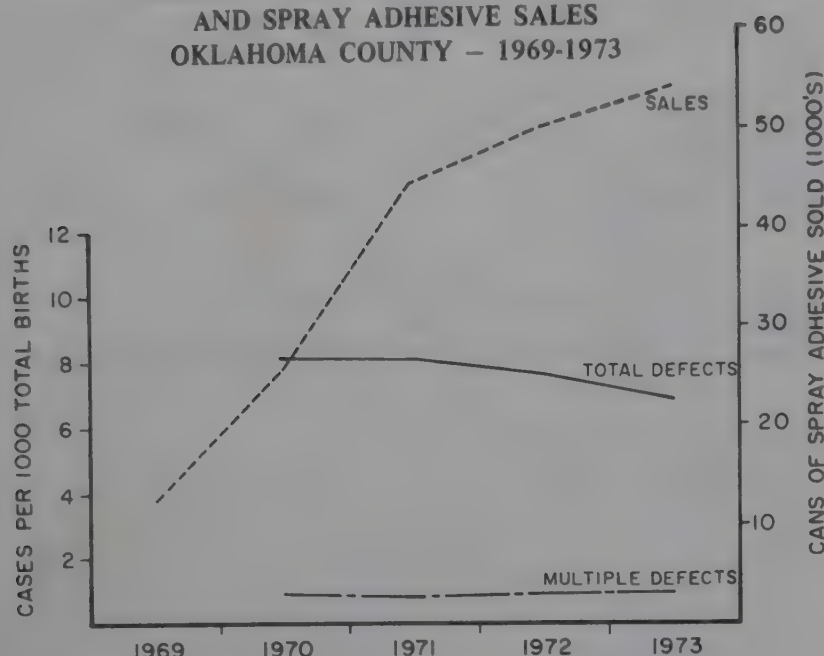
DISEASE	44th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 44 WEEKS		
	November 3, 1973	November 4, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis . . . . .	185	144	110	4,057	3,581	3,817
Brucellosis . . . . .	2	4	3	161	163	183
Chickenpox . . . . .	704	1,332	— — —	148,455	118,892	— — —
Diphtheria . . . . .	1	4	4	156	94	153
Encephalitis, primary:						
Arthropod-borne and unspecified . . . . .	40	52	37	1,305	964	1,227
Encephalitis, post-infectious . . . . .	3	2	6	244	239	300
Hepatitis, serum (Hepatitis B) . . . . .	158	151	151	6,822	7,646	6,165
Hepatitis, infectious (Hepatitis A) . . . . .	976	1,102	1,102	43,471	46,422	46,422
Malaria . . . . .	7	17	88	216	768	2,618
Measles (rubeola) . . . . .	191	207	207	24,960	28,037	28,037
Meningococcal infections, total . . . . .	16	28	28	1,178	1,146	2,093
Civilian . . . . .	16	28	28	1,153	1,102	1,879
Military . . . . .	—	—	—	25	44	207
Mumps . . . . .	750	958	1,580	59,562	60,989	84,175
Rubella (German measles) . . . . .	103	251	317	26,757	22,613	45,769
Tetanus . . . . .	2	—	2	79	98	109
Tuberculosis, new active . . . . .	444	612	— — —	26,448	28,878	— — —
Tularemia . . . . .	1	3	4	140	116	133
Typhoid fever . . . . .	7	7	8	576	310	310
Typhus, tick-borne (Rky. Mt. spotted fever) . . . . .	1	5	5	614	508	392
Venereal Diseases:						
Gonorrhea . . . . .	14,971	16,031	— — —	696,916	636,565	— — —
Syphilis, primary and secondary . . . . .	366	580	— — —	21,640	21,357	— — —
Rabies in animals . . . . .	40	80	56	2,947	3,546	2,937

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax: . . . . .	1	Poliomyelitis, total: . . . . .	6
Botulism: Ky.-1 . . . . .	17	Paralytic: . . . . .	4
Congenital rubella syndrome: Ky.-1, N.H.-1 . . . . .	30	Psittacosis: Calif.-1, N.Y., Ups.-1 . . . . .	22
Leprosy: Ohio-1, Tex.-1 . . . . .	105	Rabies in man: . . . . .	1
Leptospirosis: Md.-1, Mo.-1 . . . . .	30	Trichinosis: La.-1 . . . . .	73
Plague: . . . . .	2	Typhus, murine: . . . . .	29

## SPRAY ADHESIVES — Continued

Figure 1  
TRENDS IN BIRTH DEFECT INCIDENCE  
AND SPRAY ADHESIVE SALES  
OKLAHOMA COUNTY — 1969-1973



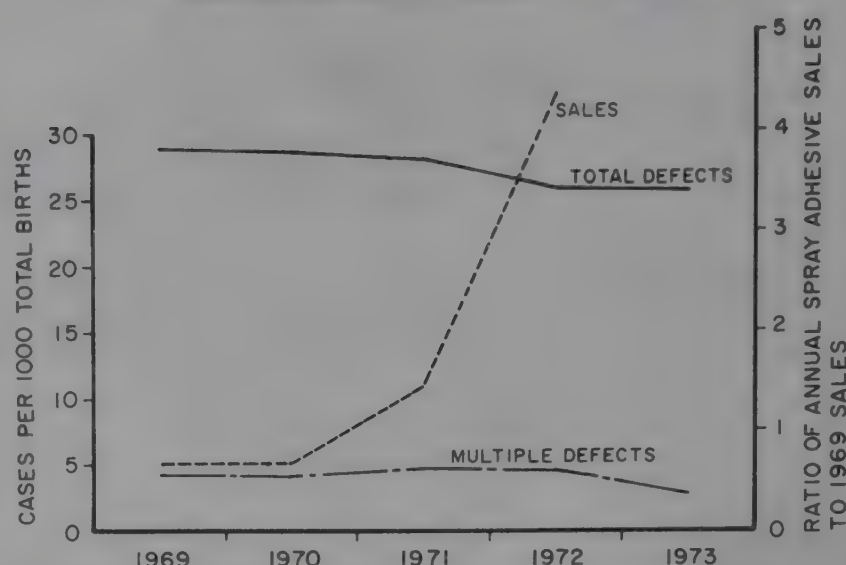
considerably higher because of recent television promotion of foil art, a hobby entailing use of spray adhesives. Under either set of exposure conditions, one would expect a distinct increase in birth defect incidence. If, for example, exposure to spray adhesives occurs in 5% of pregnant women, and if among exposed pregnancies 5% result in some common defect syndrome which normally appears at a rate of 1 case per 1,000 total births, then, during a year's time in Atlanta where approximately 30,000 births occur each year, instead of 30 such cases, 105 would be observed. In the unlikely event that spray adhesives produced all types of defects indiscriminately, comparable figures would be 775 cases observed instead of 700, or 850 observed if one assumes a 10% attack rate.

(Reported by Stanley W. Ferguson, Ph.D., State Epidemiologist, Mark Roberts, Staff Epidemiologist, Oklahoma State Department of Health; the Birth Defects Section, Cancer and Birth Defects Branch, Bureau of Epidemiology, CDC; and a team of EIS Officers.)

## Editorial Note

The above observations do not rule out the possibility that spray adhesives may bear some relation to birth defects etiology, but they do indicate that if such an effect exists, the risk involved is small. The data upon which the spray adhesive

Figure 2  
TRENDS IN BIRTH DEFECT INCIDENCE  
AND SPRAY ADHESIVE SALES  
METROPOLITAN ATLANTA — 1969-1973



ban was based consisted of 1) 2 infants with differing multiple malformations whose parents used sprays prior to their child's birth and 2) an apparent increase in frequency of chromosomal damage in peripheral blood lymphocytes cultured from these infants, their parents, and 4 other exposed persons (2). While birth defects and chromosomal damage may seem at first glance to be intrinsically related, the 2 phenomena are not necessarily interconnected. Most defects occur in the absence of visible chromosomal damage while chromosomal damage occurs often in the absence of structural malformation. The epidemiologic data presented for Oklahoma City and Atlanta concern only the issue of spray usage in relation to birth defects, and they provide no support for the concept that an etiologic link exists, at least a link of major proportions. To our knowledge no further epidemiologic evidence supporting a relationship has yet been advanced. Likewise the suggested association between spray adhesives and chromosomal damage has yet to be confirmed (3). In view of the limited nature of the original data, together with subsequent negative epidemiologic findings, it seems reasonable for the present to discount the hypothesis that use of spray adhesives represents any substantial risk for pregnant women.

## References

1. Federal Register 38:22569, 23355-23356, 1973
2. Possible link to chromosomal gaps leads to ban on spray adhesives. JAMA 225(13):1581-1582, 1973
3. Product Safety Letter Vol. 2, No. 42, October 15, 1973

## SHIGA BACILLUS DYSENTERY — California

On August 18, 1973, a 16-year-old boy living in El Monte, California, had onset of vomiting and diarrhea. He was seen by a physician 2 days later and was treated with an unspecified medication; however, he did not improve and was admitted to a hospital on August 22 with gross rectal bleeding and evidence of significant dehydration. Stool and blood specimens obtained on admission grew *Shigella dysenteriae* type 1. Between August 22 and 25 he developed severe electrolyte and acid-base derangements, disseminated intravascular coagulation, acute renal failure, jaundice, ascites, and persistent gastrointestinal bleeding. The patient was begun on intravenous ampicillin on August 25. Therapy also included repeated blood transfusion, hemodialysis, and other supportive measures aimed at correcting the patient's meta-

bolic and coagulation disorders. He slowly recovered and by September 14 had nearly normal renal and hepatic functions and no longer required transfusions.

Epidemiologic history revealed that the patient had lived in Zamora, Mexico, until entering the United States on August 18. He had traveled from Mexico with a cousin who did not become ill. In the United States, he had stayed with the cousin and a brother and his family; all have remained asymptomatic. Stool and serum specimens have been obtained from the patient's family and contacts.

(Reported by Victor Levine, M.D., Resident Supervisor, Allen Mathies, M.D., Head Physician, Communicable Disease Service, Los Angeles County-University of Southern California  
(Continued on page 371))

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING NOVEMBER 3, 1973 AND NOVEMBER 4, 1972 (44th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
	1973	1973	1973	1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES .....	185	2	704	1	156	40	52	3	158	976	1,102
NEW ENGLAND .....	11	-	107	-	3	2	1	-	5	68	94
Maine*	-	-	-	-	-	-	-	-	-	-	12
New Hampshire .....	-	-	17	-	-	-	-	-	-	6	6
Vermont .....	-	-	22	-	-	-	-	-	-	2	13
Massachusetts .....	4	-	-	-	1	2	1	-	2	31	34
Rhode Island .....	4	-	24	-	2	-	-	-	2	12	-
Connecticut .....	3	-	44	-	-	-	-	-	1	17	29
MIDDLE ATLANTIC .....	1	-	-	-	-	3	11	-	8	40	134
Upstate New York .....	1	-	-	-	-	3	-	-	8	40	32
New York City .....	---	---	---	---	---	---	-	---	---	---	31
New Jersey .....	---	---	NN	---	-	---	5	---	---	---	47
Pennsylvania .....	---	---	---	---	-	---	6	---	---	---	24
EAST NORTH CENTRAL .....	39	1	337	-	-	11	12	-	20	171	190
Ohio .....	14	-	30	-	-	7	7	-	4	50	32
Indiana .....	-	-	58	-	-	1	-	-	-	7	18
Illinois .....	-	-	-	-	-	1	3	-	12	58	57
Michigan .....	23	-	70	-	-	2	2	-	4	45	75
Wisconsin .....	2	1	179	-	-	-	-	-	-	11	8
WEST NORTH CENTRAL .....	72	-	142	-	7	10	5	-	7	49	50
Minnesota .....	7	-	16	-	-	4	4	-	2	5	4
Iowa .....	1	-	97	-	-	-	-	-	3	4	4
Missouri .....	64	-	18	-	-	4	1	-	-	9	19
North Dakota*	-	-	6	-	-	-	-	-	-	-	-
South Dakota .....	-	-	-	-	7	-	-	-	-	22	6
Nebraska .....	-	-	-	-	-	-	-	-	-	-	1
Kansas .....	-	-	5	-	-	2	-	-	2	9	16
SOUTH ATLANTIC .....	17	-	30	-	1	3	5	-	17	194	135
Delaware .....	-	-	1	-	-	-	-	-	-	2	-
Maryland .....	1	-	1	-	-	-	1	-	2	5	19
District of Columbia .....	-	-	-	-	-	-	-	-	1	-	2
Virginia .....	-	-	-	-	-	1	2	-	1	6	8
West Virginia .....	1	-	28	-	-	-	-	-	-	6	19
North Carolina .....	5	-	NN	-	-	2	-	-	-	16	26
South Carolina .....	1	-	-	-	-	-	-	-	1	25	13
Georgia .....	-	-	-	-	-	-	-	-	-	20	14
Florida .....	9	-	-	-	1	-	2	-	12	114	34
EAST SOUTH CENTRAL .....	10	-	7	-	1	2	7	-	15	88	56
Kentucky .....	5	-	3	-	-	-	-	-	2	28	24
Tennessee .....	2	-	NN	-	-	-	5	-	-	34	24
Alabama*	1	-	3	-	1	1	2	-	12	21	5
Mississippi .....	2	-	1	-	-	1	-	-	1	5	3
WEST SOUTH CENTRAL .....	10	-	32	1	16	5	5	-	17	156	128
Arkansas*	-	-	-	-	-	-	1	-	-	3	15
Louisiana .....	1	-	NN	1	1	-	1	-	7	18	13
Oklahoma*	1	-	1	-	-	1	2	-	2	8	21
Texas*	8	-	31	-	15	4	1	-	8	127	79
MOUNTAIN .....	1	-	36	-	44	1	-	-	4	41	99
Montana .....	-	-	19	-	-	-	-	-	-	7	10
Idaho .....	-	-	-	-	-	-	-	-	1	1	14
Wyoming .....	-	-	-	-	-	-	-	-	-	2	-
Colorado .....	-	-	4	-	-	-	-	-	2	5	32
New Mexico .....	1	-	13	-	25	1	-	-	1	16	16
Arizona*	-	-	-	-	19	-	-	-	-	-	24
Nevada .....	-	-	-	-	-	-	-	-	-	10	3
PACIFIC .....	24	1	13	-	84	3	6	3	65	169	216
Washington*	---	---	---	---	75	---	-	---	---	---	18
Oregon .....	1	-	1	-	3	-	-	-	7	17	33
California .....	23	1	-	-	4	3	6	3	55	150	144
Alaska .....	-	-	6	-	2	-	-	-	3	1	17
Hawaii .....	-	-	6	-	-	-	-	-	-	1	4
Guam*	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	-	-	-	-	-	-	-	-	8	15
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	1

\* Delayed Reports: Brucellosis: Ark. 1, Guam 1  
 Chickenpox: Me. 4, Guam 2  
 Diphtheria: Ariz. 2  
 Encephalitis, primary: N.Dak. 1

Encephalitis, post infectious: Ala. 1  
 Hepatitis B: Okla. 37, Ariz. 4, Guam 2  
 Hepatitis A: Me. 5, Ala. 1, Okla. 48, Tex. 81  
 Ariz. 7, Wash. 1, Guam 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING NOVEMBER 3, 1973 AND NOVEMBER 4, 1972 (44th WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES . . . . .	7	216	191	24,960	28,037	16	1,178	1,146	750	59,562	103	26,100
NEW ENGLAND . . . . .	—	17	21	7,490	3,357	—	48	49	120	3,332	4	3,600
Maine * . . . . .	—	—	—	68	249	—	1	4	11	376	—	—
New Hampshire . . . . .	—	—	8	900	372	—	7	3	1	198	2	300
Vermont . . . . .	—	2	1	120	128	—	3	—	—	273	—	—
Massachusetts . . . . .	—	7	11	3,972	781	—	13	21	30	960	1	2,000
Rhode Island . . . . .	—	1	1	620	524	—	3	12	60	494	1	200
Connecticut . . . . .	—	7	—	1,810	1,303	—	21	9	18	1,031	—	800
MIDDLE ATLANTIC . . . . .	—	31	—	2,539	1,074	—	161	139	—	7,471	5	4,200
Upstate New York . . . . .	—	17	—	811	130	—	58	32	NN	NN	5	400
New York City . . . . .	—	2	—	922	383	—	31	42	—	4,622	—	400
New Jersey . . . . .	—	5	—	442	498	—	39	26	—	1,527	—	3,000
Pennsylvania . . . . .	—	7	—	364	63	—	33	39	—	1,322	—	200
EAST NORTH CENTRAL . . . . .	1	30	40	8,729	11,367	2	158	171	193	15,175	47	6,200
Ohio . . . . .	1	5	—	290	265	1	68	66	17	2,762	3	600
Indiana . . . . .	—	3	11	672	1,290	—	4	12	26	1,409	11	900
Illinois . . . . .	—	16	6	2,101	4,193	1	26	37	19	2,533	14	1,000
Michigan . . . . .	—	6	12	4,425	2,061	—	44	48	62	4,169	9	1,800
Wisconsin . . . . .	—	—	11	1,241	3,558	—	16	8	69	4,302	10	1,600
WEST NORTH CENTRAL . . . . .	—	8	1	451	1,000	2	91	81	102	5,046	5	1,200
Minnesota . . . . .	—	2	—	21	22	2	10	24	7	95	—	200
Iowa . . . . .	—	1	—	279	694	—	21	5	87	3,107	1	200
Missouri . . . . .	—	1	—	53	164	—	34	25	—	726	3	270
North Dakota . . . . .	—	1	1	65	53	—	3	—	—	69	1	270
South Dakota . . . . .	—	—	—	—	7	—	4	2	—	19	—	20
Nebraska . . . . .	—	1	—	6	23	—	10	9	—	161	—	140
Kansas . . . . .	—	2	—	27	37	—	9	16	8	869	—	90
SOUTH ATLANTIC . . . . .	—	33	2	1,260	2,245	—	197	255	79	6,948	9	2,210
Delaware . . . . .	—	—	—	9	52	—	1	1	—	274	—	100
Maryland . . . . .	—	5	—	13	15	—	27	38	1	643	—	100
District of Columbia . . . . .	—	1	—	8	2	—	4	11	2	139	—	—
Virginia . . . . .	—	8	1	422	67	—	38	56	4	719	—	620
West Virginia . . . . .	—	—	—	218	296	—	5	8	32	2,388	3	330
North Carolina . . . . .	—	7	—	4	37	—	42	30	NN	NN	—	200
South Carolina . . . . .	—	1	1	65	216	—	13	20	2	359	—	800
Georgia . . . . .	—	3	—	152	183	—	22	19	—	32	—	100
Florida . . . . .	—	8	—	369	1,377	—	45	72	38	2,394	6	920
EAST SOUTH CENTRAL . . . . .	1	14	2	617	1,067	2	108	90	55	4,959	12	1,370
Kentucky . . . . .	1	9	2	382	535	1	38	28	4	1,478	1	400
Tennessee . . . . .	—	—	—	165	193	—	42	28	32	2,313	7	565
Alabama . . . . .	—	5	—	12	154	—	15	20	19	699	1	190
Mississippi . . . . .	—	—	—	58	185	1	13	14	—	469	3	215
WEST SOUTH CENTRAL . . . . .	—	12	5	712	1,577	7	184	138	66	4,128	4	1,480
Arkansas . . . . .	—	—	—	70	13	—	13	11	4	391	—	110
Louisiana . . . . .	—	2	—	87	99	5	47	42	8	93	—	90
Oklahoma . . . . .	—	2	1	56	10	1	32	9	1	453	—	170
Texas . . . . .	—	8	4	499	1,455	1	92	76	53	3,191	4	1,090
MOUNTAIN . . . . .	1	11	107	843	1,923	—	34	29	23	2,567	4	2,410
Montana . . . . .	—	1	106	123	16	—	7	5	4	252	—	500
Idaho . . . . .	1	1	—	256	150	—	4	8	—	114	—	40
Wyoming . . . . .	—	—	—	81	51	—	—	1	—	427	—	70
Colorado . . . . .	—	2	1	107	534	—	11	5	18	508	2	1,550
New Mexico . . . . .	—	2	—	126	127	—	3	3	1	983	2	205
Arizona * . . . . .	—	4	—	21	886	—	5	1	—	140	—	190
Utah . . . . .	—	1	—	128	158	—	2	5	—	134	—	70
Nevada . . . . .	—	—	—	1	1	—	2	1	—	9	—	40
PACIFIC . . . . .	4	60	13	2,319	4,427	3	197	194	112	9,936	13	3,930
Washington . . . . .	—	3	—	1,027	982	—	20	17	—	1,578	—	700
Oregon . . . . .	—	4	—	461	135	—	16	14	19	1,868	3	790
California . . . . .	4	50	12	746	3,199	3	154	152	56	5,405	10	2,400
Alaska . . . . .	—	2	—	65	13	—	7	8	37	809	—	90
Hawaii . . . . .	—	1	1	20	98	—	—	3	—	276	—	20
Guam * . . . . .	—	—	—	52	16	—	—	13	—	28	—	140
Puerto Rico . . . . .	—	—	10	1,919	808	—	8	4	17	800	3	360
Virgin Islands . . . . .	—	—	—	7	3	—	—	2	1	25	—	20

\*Delayed reports: Measles: Me. 1, Guam 2  
Meningococcal infections: Ariz. 1

Mumps: Me. 4, Guam 3  
Rubella: Guam 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING NOVEMBER 3, 1973 AND NOVEMBER 4, 1972 (44th WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES .....	79	444	26,448	140	7	576	1	614	14,971	366	40	2,947
NEW ENGLAND .....	2	26	980	—	1	17	—	3	495	12	2	113
Maine .....	—	3	91	—	—	—	—	—	27	—	2	60
New Hampshire .....	—	1	48	—	—	—	—	—	32	3	—	37
Vermont .....	—	—	27	—	—	—	—	—	19	—	—	3
Massachusetts .....	—	12	516	—	—	14	—	2	237	3	—	6
Rhode Island .....	1	2	83	—	—	—	—	—	35	1	—	1
Connecticut .....	1	8	215	—	1	3	—	1	145	5	—	6
MIDDLE ATLANTIC .....	7	12	5,120	—	—	56	—	34	649	20	1	48
Upstate New York .....	1	12	911	—	—	10	—	13	649	20	1	24
New York City .....	3	---	1,896	—	---	21	---	4	---	---	---	—
New Jersey .....	2	---	904	—	---	15	---	5	---	---	---	—
Pennsylvania .....	1	---	1,409	—	---	10	---	12	---	---	---	24
EAST NORTH CENTRAL .....	13	82	3,925	3	1	46	—	19	2,358	27	3	279
Ohio * .....	3	20	1,171	—	—	18	—	14	879	4	—	32
Indiana .....	4	10	502	—	1	1	—	—	154	5	—	52
Illinois .....	3	35	1,188	1	—	10	—	5	374	4	—	69
Michigan .....	1	17	987	2	—	13	—	—	662	13	—	7
Wisconsin * .....	2	—	77	—	—	4	—	—	289	1	3	119
WEST NORTH CENTRAL .....	6	12	1,108	17	1	25	—	24	1,033	14	16	931
Minnesota .....	—	—	135	—	1	5	—	2	217	5	9	346
Iowa .....	—	2	111	—	—	—	—	7	202	2	3	191
Missouri .....	5	7	527	16	—	12	—	8	225	7	—	89
North Dakota .....	1	—	36	—	—	—	—	—	5	—	2	139
South Dakota .....	—	—	77	—	—	1	—	1	48	—	—	81
Nebraska .....	—	1	72	—	—	1	—	2	145	—	—	3
Kansas .....	—	2	150	1	—	6	—	4	191	—	2	82
SOUTH ATLANTIC .....	18	123	5,287	17	—	248	—	304	3,933	141	3	263
Delaware .....	—	2	84	—	—	—	—	8	45	1	—	3
Maryland .....	—	15	581	6	—	9	—	14	476	15	1	15
District of Columbia .....	—	5	253	—	—	—	—	—	423	16	—	—
Virginia .....	3	26	714	4	—	3	—	61	360	32	—	79
West Virginia .....	1	7	254	—	—	10	—	4	49	—	—	22
North Carolina .....	—	14	853	2	—	5	—	138	307	9	—	13
South Carolina .....	2	4	413	—	—	6	—	32	349	20	—	5
Georgia .....	2	17	861	3	—	3	—	46	1,100	8	2	87
Florida .....	10	33	1,274	2	—	212	—	1	824	40	—	39
EAST SOUTH CENTRAL .....	8	48	2,389	10	1	42	1	111	1,428	27	1	375
Kentucky .....	1	7	527	1	1	11	—	—	133	12	—	198
Tennessee .....	5	21	754	7	—	14	—	52	645	15	1	134
Alabama .....	2	14	667	—	—	10	1	26	287	—	—	42
Mississippi .....	—	6	441	2	—	7	—	33	363	—	—	1
WEST SOUTH CENTRAL .....	14	66	2,739	88	—	26	—	103	2,360	29	6	516
Arkansas .....	1	8	338	60	—	5	—	20	426	1	1	109
Louisiana .....	4	—	380	1	—	6	—	—	411	11	1	43
Oklahoma .....	4	10	236	20	—	2	—	74	187	2	2	148
Texas .....	5	48	1,785	7	—	13	—	9	1,336	15	2	216
MOUNTAIN .....	—	19	897	4	—	14	—	8	633	15	—	50
Montana .....	—	3	45	—	—	—	—	1	44	—	—	10
Idaho .....	—	—	30	—	—	1	—	2	32	—	—	—
Wyoming .....	—	—	24	—	—	1	—	1	17	—	—	—
Colorado .....	—	2	173	—	—	2	—	1	193	5	—	—
New Mexico .....	—	7	190	1	—	4	—	3	97	—	—	7
Arizona * .....	—	5	345	—	—	6	—	—	163	4	—	30
Utah * .....	—	—	38	2	—	—	—	—	59	—	—	3
Nevada .....	—	2	52	1	—	—	—	—	28	6	—	—
PACIFIC .....	11	56	4,003	1	3	102	—	8	2,082	81	8	372
Washington .....	3	---	307	—	---	7	---	5	---	---	---	9
Oregon .....	—	2	211	—	—	2	—	2	273	—	—	8
California .....	8	52	3,161	1	3	88	—	1	1,638	80	8	347
Alaska .....	—	—	44	—	—	4	—	—	123	—	—	8
Hawaii .....	—	2	280	—	—	1	—	—	48	1	—	—
Guam* .....	—	—	36	—	—	—	—	—	—	—	—	—
Puerto Rico .....	8	10	427	—	—	9	—	—	127	25	—	46
Virgin Islands .....	—	—	2	—	—	—	—	—	3	2	—	—

\* Delayed Reports: TB: Wis. delete 1, Guam 1  
Typhoid: Wis. 1  
Gonorrhea: Guam 29

Syphilis: Ohio delete 1, Tex. 1, Guam 1  
Rabies: N.H. 1, Ariz. 1, Utah delete 1

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING NOVEMBER 3, 1973

Week No.

44

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	734	450	30	47	SOUTH ATLANTIC	1,290	712	44	31
Boston, Mass.	183	90	10	16	Atlanta, Ga.	172	83	6	4
Bridgeport, Conn.	50	35	3	2	Baltimore, Md.	324	180	6	6
Cambridge, Mass.	26	19	—	4	Charlotte, N. C.	63	28	3	—
Fall River, Mass.	21	13	—	—	Jacksonville, Fla.	107	58	6	—
Hartford, Conn.	68	41	4	3	Miami, Fla.	117	58	5	3
Lowell, Mass.	38	22	1	1	Norfolk, Va.	71	41	4	6
Lynn, Mass.	27	24	—	1	Richmond, Va.	85	39	5	7
New Bedford, Mass.	35	25	—	6	Savannah, Ga.	26	13	—	—
New Haven, Conn.	55	34	4	2	St. Petersburg, Fla.	102	84	3	3
Providence, R. I.	69	48	3	5	Tampa, Fla.	58	36	1	4
Somerville, Mass.	8	4	—	1	Washington, D. C.	117	62	2	5
Springfield, Mass.	55	30	2	2	Wilmington, Del.	48	30	3	2
Waterbury, Conn.	34	21	1	1	EAST SOUTH CENTRAL	728	418	28	25
Worcester, Mass.	65	44	2	3	Birmingham, Ala.	129	72	3	1
MIDDLE ATLANTIC	3,325	2,027	83	191	Chattanooga, Tenn.	56	30	5	5
Albany, N. Y.	52	27	2	2	Knoxville, Tenn.	45	30	—	2
Allentown, Pa.	21	16	—	2	Louisville, Ky.	126	77	5	6
Buffalo, N. Y.	164	97	5	15	Memphis, Tenn.	157	92	4	2
Camden, N. J.	36	23	—	—	Mobile, Ala.	64	34	4	2
Elizabeth, N. J.	37	20	—	1	Montgomery, Ala.	35	26	1	3
Erie, Pa.	42	27	1	7	Nashville, Tenn.	116	57	6	4
Jersey City, N. J.	61	39	1	4	WEST SOUTH CENTRAL	1,225	658	56	34
Newark, N. J.	65	41	—	3	Austin, Tex.	44	23	2	1
New York City, N. Y.*	1,669	1,022	36	87	Baton Rouge, La.	11	7	—	1
Paterson, N. J.*	47	28	1	5	Corpus Christi, Tex.	44	20	2	—
Philadelphia, Pa.	496	282	17	33	Dallas, Tex.	154	71	2	2
Pittsburgh, Pa.	194	116	7	14	El Paso, Tex.	50	31	6	3
Reading, Pa.	44	32	2	2	Fort Worth, Tex.	89	57	2	—
Rochester, N. Y.	143	87	6	8	Houston, Tex.	227	112	9	10
Schenectady, N. Y.	34	21	—	—	Little Rock, Ark.	77	39	12	2
Scranton, Pa.	35	30	—	1	New Orleans, La.	171	91	2	2
Syracuse, N. Y.	72	41	4	1	Oklahoma City, Okla.*	86	49	4	2
Trenton, N. J.	57	37	—	1	San Antonio, Tex.	151	90	10	2
Utica, N. Y.	24	15	—	1	Shreveport, La.	62	34	3	3
Yonkers, N. Y.	32	26	1	4	Tulsa, Okla.	59	34	2	6
EAST NORTH CENTRAL	2,669	1,550	125	67	MOUNTAIN	460	279	16	19
Akron, Ohio	68	46	1	—	Albuquerque, N. Mex.	54	27	3	7
Canton, Ohio	51	36	2	—	Colorado Springs, Colo.	33	19	1	4
Chicago, Ill.	658	385	19	18	Denver, Colo.	107	66	3	2
Cincinnati, Ohio	179	108	5	3	Las Vegas, Nev.	17	10	—	1
Cleveland, Ohio	221	121	8	2	Ogden, Utah	18	12	—	2
Columbus, Ohio	182	106	16	3	Phoenix, Ariz.	104	65	3	2
Dayton, Ohio	95	55	2	1	Pueblo, Colo.	19	10	1	2
Detroit, Mich.	380	189	39	4	Salt Lake City, Utah	49	32	2	—
Evansville, Ind.	55	35	2	3	Tucson, Ariz.	59	38	3	1
Fort Wayne, Ind.	52	30	4	3	PACIFIC	1,803	1,144	59	43
Gary, Ind.	38	17	—	1	Berkeley, Calif.	17	11	—	—
Grand Rapids, Mich.	53	35	1	6	Fresno, Calif.	39	26	—	2
Indianapolis, Ind.	166	89	7	1	Glendale, Calif.	25	19	1	—
Madison, Wis.	46	24	3	2	Honolulu, Hawaii*	58	33	4	1
Milwaukee, Wis.	138	93	1	3	Long Beach, Calif.	96	65	2	4
Peoria, Ill.	44	25	3	—	Los Angeles, Calif.	645	411	23	17
Rockford, Ill.	48	32	4	6	Oakland, Calif.	70	47	2	1
South Bend, Ind.	35	18	5	6	Pasadena, Calif.	34	26	1	1
Toledo, Ohio	95	63	2	1	Portland, Oreg.	143	100	2	3
Youngstown, Ohio	65	43	1	4	Sacramento, Calif.	54	31	2	—
WEST NORTH CENTRAL	813	512	24	30	San Diego, Calif.	132	65	9	4
Des Moines, Iowa	71	43	2	1	San Francisco, Calif.	165	91	7	5
Duluth, Minn.	24	18	—	2	San Jose, Calif.	53	31	1	1
Kansas City, Kans.	37	21	2	2	Seattle, Wash.	168	118	3	3
Kansas City, Mo.	153	93	7	3	Spokane, Wash.	61	37	2	1
Lincoln, Nebr.	34	24	1	6	Tacoma, Wash.	43	33	—	—
Minneapolis, Minn.	116	80	1	1	Total	13,047	7,750	465	493
Omaha, Nebr.	82	55	4	—	Expected Number	12,482	7,159	542	416
St. Louis, Mo.	175	104	5	12	Cumulative Total (includes reported corrections for previous weeks)	564,288	331,727	21,158	22,674
St. Paul, Minn.	72	47	1	1					
Wichita, Kans.	49	27	1	2					

\* Estimate based on average percent of divisional total

**DYSENTERY – Continued**

*Medical Center; Ichiro Kamei, M.D., Chief, Ralph R. Sachs, M.D., Deputy Director, Division of Acute Communicable Disease Control, Los Angeles County-Community Health Services; James Chin, M.D., State Epidemiologist, California State Department of Health; and 2 EIS Officers.)*

**Editorial Note**

In this country, Shiga bacillus dysentery has occurred during the past several years in an epidemiologically distinct group: travelers from Mexico, primarily, and Central America and their contacts. Of 70 cases reported in 1972, 58 (83%) occurred in the 4 states bordering Mexico, and most were in persons who had recently been in Mexico or who had close contact with a traveler from Mexico (1).

Unlike other forms of shigellosis, Shiga bacillus dysentery

is a serious intestinal infection that may be responsible for substantial morbidity and which may result in death if diagnosis and treatment are delayed or the patient treated inappropriately. The case described here illustrates many of the associated medical problems which may complicate this illness. The diagnosis of Shiga bacillus dysentery should be considered in patients with dysentery who have recently traveled or had contact with travelers to Mexico or Central America. Appropriate stool and blood specimens should be obtained and the patient started promptly on ampicillin therapy. To date, these organisms have been uniformly sensitive to ampicillin, the drug of choice.

**Reference**

1. Weissman JB, Rice PA, Krogstad DJ, Baine WB, Gangarosa EJ: Risk of severe intestinal infection to the traveler in Mexico. *J Infect Dis* 128:574-578, 1973

### CURRENT TRENDS PRIMARY AND SECONDARY SYPHILIS – United States, September 1973

In September 1973, State Health Departments provisionally reported 2,055 cases of syphilis in the primary and secondary stages, a decrease of 5.8% compared with the number reported in September 1972. Reported cases of primary and secondary syphilis for the United States increased each year in the period 1969 through 1972, the overall increase measuring 28%. Increases of similar magnitude were reported in the early part of 1973, but since April, cases have

increased at a slower rate. For the period April-September 1973, reported cases numbered 12,580, an increase of only 0.1% over the number reported in the same 6-month period in 1972. The data for the past 6 months suggests a definite leveling of the national trend after 4 consecutive years of an increase in infectious syphilis.

*(Reported by the Venereal Disease Branch, Bureau of State Services, CDC.)*

**SUMMARY OF REPORTED CASES OF INFECTIOUS SYPHILIS**

CASES OF PRIMARY AND SECONDARY SYPHILIS: BY REPORTING AREAS – SEPTEMBER, 1973 AND SEPTEMBER, 1972 – PROVISIONAL DATA

Reporting Area	September		Cumulative January – September		Reporting Area	September		Cumulative January – September	
	1973	1972	1973	1972		1973	1972	1973	1972
<b>NEW ENGLAND</b> .....	63	60	820	637	<b>EAST SOUTH CENTRAL</b> .....	111	163	1,006	1,112
Maine .....	1	—	21	21	Kentucky .....	18	49	265	263
New Hampshire .....	1	—	7	6	Tennessee .....	54	55	340	386
Vermont .....	3	1	16	12	Alabama .....	13	17	137	161
Massachusetts .....	35	37	565	360	Mississippi .....	26	42	264	302
Rhode Island .....	4	4	18	31	<b>WEST SOUTH CENTRAL</b> .....	262	210	2,056	2,237
Connecticut .....	19	18	193	207	Arkansas .....	5	8	106	150
<b>MIDDLE ATLANTIC</b> .....	409	489	4,245	4,384	Louisiana .....	78	83	626	684
Upstate New York .....	29	26	300	316	Oklahoma .....	15	6	134	71
New York City .....	239	345	2,612	3,029	Texas .....	164	113	1,190	1,332
Pa. (Excl. Phila.) .....	16	16	196	141	<b>MOUNTAIN</b> .....	44	38	428	381
Philadelphia .....	53	28	382	237	Montana .....	—	2	2	7
New Jersey .....	72	74	755	661	Idaho .....	1	1	10	4
<b>EAST NORTH CENTRAL</b> .....	194	213	1,714	1,964	Wyoming .....	—	—	3	9
Ohio .....	26	25	212	242	Colorado .....	9	5	153	58
Indiana .....	22	22	220	186	New Mexico .....	1	9	55	79
Downstate Illinois .....	17	3	149	103	Arizona .....	23	11	135	149
Chicago .....	82	93	692	805	Utah .....	1	2	12	17
Michigan .....	43	57	380	586	Nevada .....	9	8	58	58
Wisconsin .....	4	13	61	42	<b>PACIFIC</b> .....	297	301	3,195	2,702
<b>WEST NORTH CENTRAL</b> .....	55	24	268	225	Washington .....	19	14	121	96
Minnesota .....	3	3	75	40	Oregon .....	2	1	34	33
Iowa .....	8	5	42	42	California .....	269	285	2,984	2,543
Missouri .....	39	11	118	91	Alaska .....	3	—	14	13
North Dakota .....	1	2	2	2	Hawaii .....	4	1	42	17
South Dakota .....	1	—	5	2	<b>U.S. TOTAL</b> .....	2,055	2,181	19,070	18,528
Nebraska .....	1	—	10	16	<b>TERRITORIES</b> .....	67	60	607	658
Kansas .....	2	3	16	32	Puerto Rico .....	63	52	582	593
<b>SOUTH ATLANTIC</b> .....	620	683	5,338	4,886	Virgin Islands .....	4	8	25	65
Delaware .....	6	4	72	47					
Maryland .....	60	86	640	722					
District of Columbia .....	74	81	599	628					
Virginia .....	83	79	581	392					
West Virginia .....	1	7	14	23					
North Carolina .....	54	60	467	406					
South Carolina .....	78	45	559	353					
Georgia .....	103	125	958	1,065					
Florida .....	161	196	1,448	1,250					

Note: Cumulative Totals include revised and delayed reports through previous months.

EPIDEMIOLOGIC NOTES AND REPORTS  
SHELLFISH-ASSOCIATED HEPATITIS — Georgia, Texas

### Georgia

Between October 16 and 25, 1973, 14 cases of hepatitis-A were reported from the northwest Georgia town of Calhoun. Thirteen of the 14 ill persons gave a history of attending a seafood dinner at the local Elk's Lodge 4 weeks earlier on September 21 and 22. The fourteenth person, a 14-year-old girl, did not attend the dinner but ate raw oysters brought home from the dinner by her parents. Subsequent food histories obtained from 140 persons who attended the dinner implicated raw oysters as the vehicle of infection ( $p < .01$ ). (Reported by William R. Thompson, M.D., private physician, Calhoun; Jackie Tyner, Public Health Nurse, Gordon County Health Department; John E. McCroan, Ph.D., Supervisor, Thomas McKinley, John D. Smith, Epidemiology Section, Georgia Department of Human Resources; Billy Riddle, Consumer Protection Division, Georgia Department of Agriculture.)

### Texas

On October 31, 1973, the Houston City Health Department began receiving reports of cases of hepatitis-A among out-of-state employees of several Houston-based industrial firms who consumed meals at a Houston restaurant during the period September 20-29. Since a local restaurant was implicated as the source of disease, hepatitis surveillance in the

Houston area was initiated and thus far has uncovered 65 cases of hepatitis-A in persons who ate meals at the restaurant during this same period. Food histories from 61 cases and controls have implicated the consumption of raw oysters on the half-shell.

A total of 17 additional ill persons who reside in 13 states have been identified to date as having eaten at the Houston restaurant. The appropriate state epidemiologists have been notified.

(Reported by Robert MacLean, M.D., Communicable Disease Director, Albert Randall, M.D., Director, Houston City Health Department; M. S. Dickerson, M.D., State Epidemiologist, Texas State Department of Health; and 1 EIS Officer.)

Evidence indicates that the oysters responsible for the disease in Georgia and Texas originated from a single supplier in Louisiana. The Food and Drug Administration and the State of Louisiana are investigating the oyster beds fished by this supplier and are trying to trace the shipments of his oysters to various Gulf Coast distributors. Viral hepatitis surveillance is being established in those areas of the Gulf that have received oyster shipments from the suspect supplier.

(Reported by Charles T. Caraway, D.V.M., State Epidemiologist, Louisiana Department of Health; Viral Diseases Branch, Bureau of Epidemiology, CDC.)

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to:

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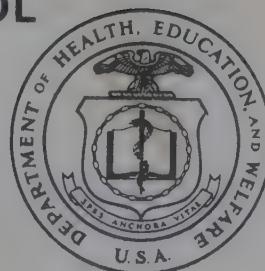


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# Morbidity and Mortality



Vol. 22, No. 45

WEEKLY  
REPORT

For  
Week Ending  
November 10, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE  
DATE OF RELEASE: NOVEMBER 16, 1973 - ATLANTA, GEORGIA 30333

## SURVEILLANCE SUMMARY

### CONTINUING DENGUE-2 TRANSMISSION - Puerto Rico

Surveillance at health centers for dengue-like illness has revealed continuing dengue transmission in Puerto Rico. Most of the confirmed dengue during recent months has been in residents of the town of Villalba (1970 population 4,134; elevation 520 feet) in southcentral Puerto Rico. This area was spared during the 1968-69 epidemic; no cases of dengue were reported from the entire municipality of Villalba (1970 population 18,733).

Patients with dengue-like illness were seen at the Villalba Health Center in November 1972; 8 cases were confirmed serologically, 1 of these also by virus isolation, between November 8, 1972, and February 10, 1973. Mosquito control activities by the Puerto Rico Health Department were begun in selected areas of Villalba in late January 1973. Only 1 case

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of dengue-like illness was recognized in March and April, but beginning in May many residents of the town of Villalba and surrounding *barrios* visited the health center with clinical manifestations suggesting dengue fever. The number of outpatients with clinically diagnosed dengue is shown in Figure 1. Serologic tests on paired serum specimens from patients with onset of illness in May, June, July, and August have confirmed the clinical impression of dengue. Test results are consistent with recent infection by dengue-2 virus.

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

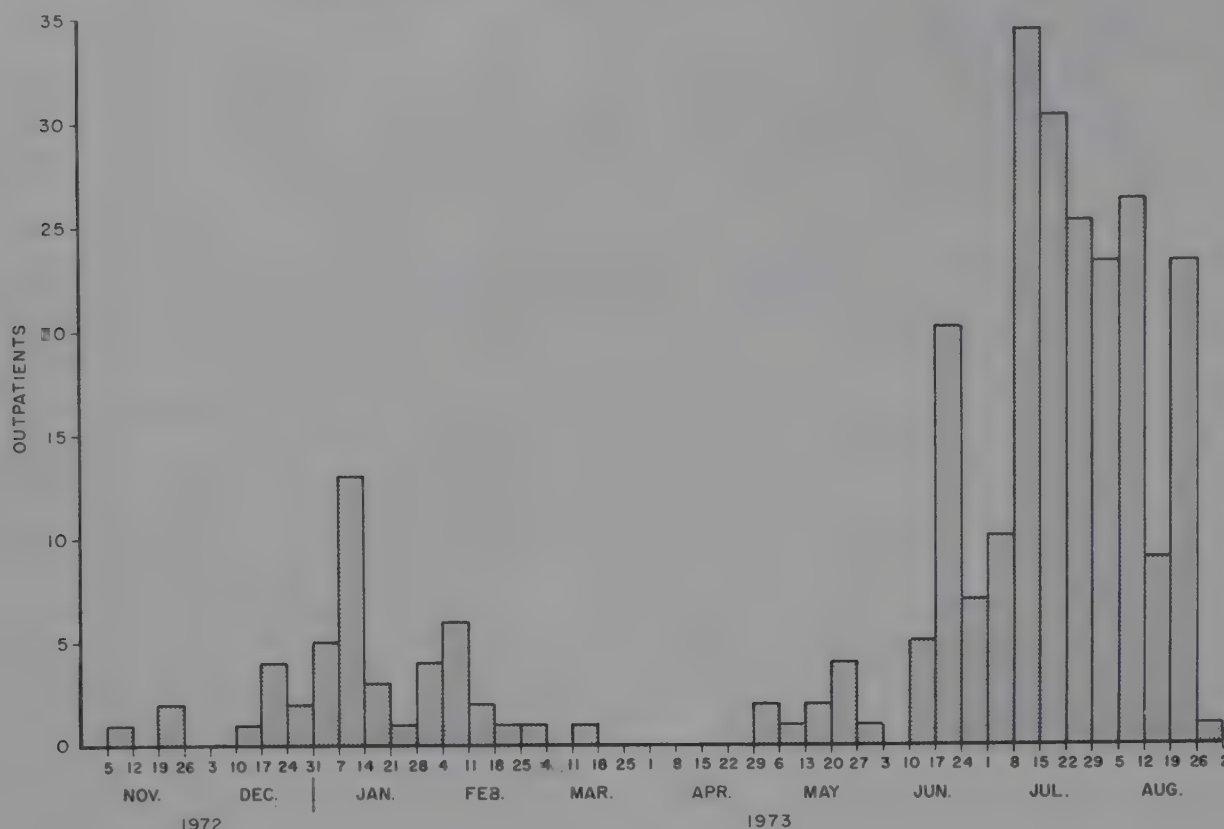
DISEASE	45th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 45 WEEKS		
	November 10, 1973	November 11, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis . . . . .	98	125	116	4,175	3,706	3,890
Brucellosis . . . . .	2	4	4	163	167	187
Chickenpox . . . . .	928	1,651	---	149,553	120,543	---
Diphtheria . . . . .	—	3	5	156	97	158
Encephalitis, primary:						
Arthropod-borne and unspecified . . . . .	40	24	33	1,350	988	1,249
Encephalitis, post-infectious . . . . .	4	3	2	248	242	302
Hepatitis, serum (Hepatitis B) . . . . .	143	172	163	7,003	7,818	6,328
Hepatitis, infectious (Hepatitis A) . . . . .	889	1,103	1,112	44,496	47,525	47,525
Malaria . . . . .	3	10	38	223	778	2,656
Measles (rubeola) . . . . .	171	359	359	25,159	28,396	28,396
Meningococcal infections, total . . . . .	24	23	29	1,204	1,169	2,129
Civilian . . . . .	24	22	27	1,178	1,124	1,914
Military . . . . .	—	1	2	26	45	209
Mumps . . . . .	1,043	959	1,683	60,697	61,948	86,209
Rubella (German measles) . . . . .	122	256	317	26,893	22,869	46,086
Tetanus . . . . .	—	4	4	79	102	115
Tuberculosis, new active . . . . .	610	614	---	27,136	29,492	---
Tularemia . . . . .	2	2	1	144	118	133
Typhoid fever . . . . .	2	14	14	582	324	324
Typhus, tick-borne (Rky. Mt. spotted fever) . . . . .	4	2	2	618	510	394
Venereal Diseases:						
Gonorrhea . . . . .	15,446	15,744	---	714,415	652,309	---
Syphilis, primary and secondary . . . . .	412	565	---	22,152	21,922	---
Rabies in animals . . . . .	47	57	50	2,998	3,603	2,994

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax: . . . . .	1	Poliomyelitis, total: Va. 1 . . . . .	7
Botulism: . . . . .	17	Paralytic: Va. 1 . . . . .	5
Congenital rubella syndrome: . . . . .	30	Psittacosis: . . . . .	22
Leprosy: Calif. 4, Hawaii 3. . . . .	112	Rabies in man: . . . . .	1
Leptospirosis: . . . . .	30	Trichinosis: P.R. 1 . . . . .	73
Plague: . . . . .	2	Typhus, murine: . . . . .	29

## DENGUE-2 — Continued

Figure 1  
OUTPATIENTS WITH ACUTE DENGUE-LIKE ILLNESS VISITING THE HEALTH CENTER,  
VILLALBA, PUERTO RICO, NOV. 1972-AUG. 1973



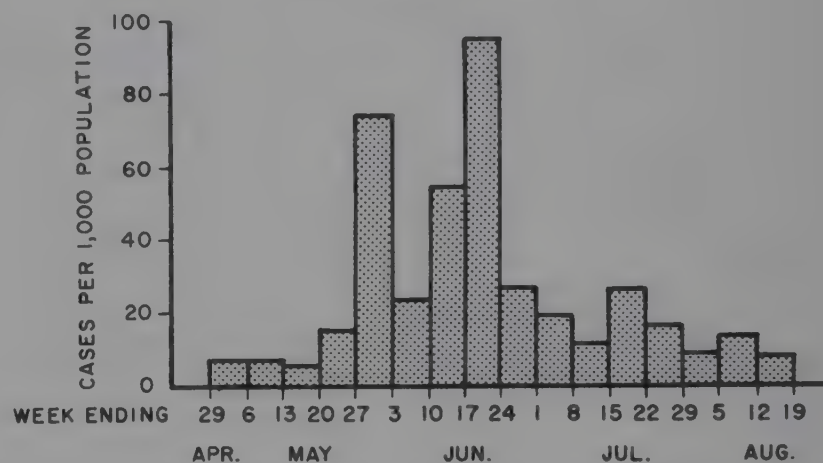
Investigations were conducted in Villalba in late June 1973 and again in mid-August. Survey teams visited households to collect information on recent febrile illnesses, search for *Aedes aegypti* larvae, and collect adult *A. aegypti* mosquitoes. Serum specimens were obtained from persons with febrile illness of recent onset for attempts at virus isolation; mosquitoes were sorted live and stored in liquid nitrogen for subsequent virus isolation attempts.

The survey teams visited urban Villalba (36 houses) and 2 outlying *barrios*, Camarones and Chino (31 and 46 houses, respectively), in late June. The same houses in Camarones and Chino were visited again in August. For urban Villalba, the attack rate for febrile illness in May and June was 21%. Between May 1 and August 20, febrile illness attack rates were 55% for Camarones and 34% for Chino. Overall, of 647 persons surveyed in 113 households in and near Villalba, 249 (39%) had experienced a febrile illness between May 1 and August 20, 1973. Figure 2 indicates peak activity in mid-June in the areas surveyed, somewhat earlier than the peak number of clinical cases seen at the Villalba Health Center.

Of 31 houses in Camarones inspected for *A. aegypti* larvae, 16 were positive, for a premises index of 52%. In the June surveys, 441 adult female *A. aegypti* were collected (resting collections) in a total of 83 man-hours, an average of 5 mosquitoes per man-hour. The mosquito counts were 2.3 per man-hour for urban Villalba, 3.2 for Camarones, and 7.0 for Chino. Repeat visits in August to Camarones, after mosquito control activities had been completed, yielded no female *A. aegypti* in 8 hours of collection effort. In Chino, where control activities were still in progress, the August visit yielded 1.5 female *A. aegypti* per man-hour in 9 hours of collection effort.

Dengue-like illness has recently been detected in Collores, a *barrio* 4 to 5 miles southwest of Villalba. On August 27, a

Figure 2  
CASES OF FEBRILE ILLNESS, PER 1,000 POPULATION,  
BY DATE OF ONSET, VILLALBA, PUERTO RICO,  
MAY-AUG. 1973



survey of 14% of the population of 2,407 revealed that 72 persons (21%) had experienced a febrile illness since June 24. Figure 3 shows a progressive increase in febrile illness attack rates from late June to late August. Seroconversions to dengue-2 in 3 of 4 paired serum specimens tested confirmed the clinical impression of dengue. Mosquito collection efforts yielded 4.7 adult female *A. aegypti* per man-hour. Further virologic and serologic studies are in progress.

No hemorrhagic manifestations of dengue infection were observed during these studies. Several strains of virus have been isolated in suckling mice from acute serum specimens, but none have been identified.

(Continued on page 379)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING NOVEMBER 10, 1973 AND NOVEMBER 11, 1972 (45th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES .....	98	2	928	-	156	40	24	4	143	889	1,103
NEW ENGLAND .....	7	-	184	-	3	-	1	-	2	53	91
Maine *	-	-	-	-	-	-	-	-	-	-	17
New Hampshire .....	-	-	18	-	-	-	-	-	-	-	8
Vermont .....	-	-	11	-	-	-	-	-	-	4	2
Massachusetts .....	1	-	66	-	1	-	-	-	-	21	34
Rhode Island .....	5	-	38	-	2	-	-	-	2	20	7
Connecticut .....	1	-	51	-	-	-	1	-	-	8	23
MIDDLE ATLANTIC .....	12	-	23	-	-	4	5	-	17	93	155
Upstate New York .....	2	-	-	-	-	1	3	-	4	31	49
New York City *	1	-	23	-	-	-	-	-	5	9	33
New Jersey *	5	-	NN	-	-	-	1	-	4	23	39
Pennsylvania *	4	-	-	-	-	3	1	-	4	30	34
EAST NORTH CENTRAL .....	18	-	348	-	-	15	11	1	16	132	172
Ohio .....	2	-	19	-	-	10	4	-	5	40	56
Indiana *	-	-	28	-	-	3	-	-	-	7	6
Illinois .....	2	-	-	-	-	1	1	1	1	23	46
Michigan .....	11	-	142	-	-	1	6	-	9	54	58
Wisconsin .....	3	-	159	-	-	-	-	-	1	8	6
WEST NORTH CENTRAL .....	7	-	90	-	7	15	1	2	15	46	26
Minnesota .....	2	-	3	-	-	1	-	2	-	3	2
Iowa .....	-	-	60	-	-	1	-	-	-	-	2
Missouri .....	5	-	2	-	-	10	1	-	-	12	16
North Dakota .....	-	-	25	-	-	-	-	-	-	1	-
South Dakota .....	-	-	-	-	7	-	-	-	-	22	2
Nebraska .....	-	-	-	-	-	-	-	-	-	-	-
Kansas .....	-	-	-	-	-	3	-	-	15	8	4
SOUTH ATLANTIC .....	14	2	88	-	1	1	1	-	8	91	149
Delaware .....	-	-	2	-	-	-	-	-	-	1	3
Maryland .....	5	-	1	-	-	-	1	-	2	20	18
District of Columbia .....	1	-	3	-	-	-	-	-	-	-	3
Virginia .....	5	-	1	-	-	-	-	-	-	12	25
West Virginia .....	-	-	79	-	-	-	-	-	-	7	23
North Carolina .....	3	-	NN	-	-	-	-	-	5	16	20
South Carolina .....	-	-	2	-	-	-	-	-	1	9	2
Georgia .....	-	2	-	-	-	1	-	-	-	26	25
Florida .....	---	---	---	---	1	---	-	---	---	---	30
EAST SOUTH CENTRAL .....	20	-	10	-	1	-	2	1	6	86	64
Kentucky .....	-	-	8	-	-	-	-	-	-	29	25
Tennessee .....	18	-	NN	-	-	-	1	1	3	43	28
Alabama .....	1	-	2	-	1	-	-	-	3	8	5
Mississippi .....	1	-	-	-	-	-	1	-	-	6	6
WEST SOUTH CENTRAL .....	8	-	29	-	16	1	1	-	10	195	125
Arkansas *	-	-	3	-	-	-	1	-	-	1	5
Louisiana .....	2	-	NN	-	1	1	-	-	3	16	-
Oklahoma .....	-	-	9	-	-	-	-	-	1	17	24
Texas .....	6	-	17	-	15	-	-	-	6	161	96
MOUNTAIN .....	-	-	33	-	44	1	1	-	2	24	102
Montana .....	-	-	16	-	-	-	-	-	-	-	6
Idaho .....	-	-	-	-	-	1	-	-	-	2	23
Wyoming .....	-	-	3	-	-	-	-	-	-	2	2
Colorado .....	-	-	8	-	-	-	-	-	2	7	17
New Mexico .....	-	-	4	-	25	-	-	-	-	9	22
Arizona *	-	-	-	-	19	-	-	-	-	-	18
Utah .....	-	-	2	-	-	-	1	-	-	4	7
Nevada .....	-	-	-	-	-	-	-	-	-	-	7
PACIFIC .....	12	-	123	-	84	3	1	-	67	169	219
Washington *	-	-	115	-	75	-	-	-	5	27	25
Oregon .....	-	-	-	-	3	-	-	-	6	19	32
California .....	12	-	-	-	4	3	1	-	56	117	145
Alaska .....	-	-	1	-	2	-	-	-	-	6	1
Hawaii .....	-	-	7	-	-	-	-	-	-	-	16
Guam .....	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	-	7	-	-	-	-	-	-	18	33
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-

\* Delayed Reports: Aseptic meningitis: N.Y.C. 7, N.J. 8, Pa. 5  
Chickenpox: Me. 3, N.Y.C. 14, Wash. 153  
Encephalitis, primary: Pa. 4, Wash. 1

Hepatitis B: N.Y.C. 12, N.J. 14, Pa. 8, Wash. 4  
Hepatitis A: Me. 8, N.Y.C. 19, N.J. 38, Pa. 31, Ind. delete 3,  
Ark. 6, Ariz. 10, Wash. 27

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING NOVEMBER 10, 1973 AND NOVEMBER 11, 1972 (45th WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES . . . . .	3	223	171	25,159	28,396	24	1,204	1,169	1,043	60,697	122	26,898
NEW ENGLAND . . . . .	—	17	7	7,502	3,469	2	50	51	188	3,521	10	3,677
Maine *	—	—	—	68	249	—	1	4	5	382	—	7
New Hampshire *	—	—	2	907	397	—	7	3	1	199	—	37
Vermont . . . . .	—	2	—	120	128	—	3	—	1	274	—	4
Massachusetts . . . . .	—	7	3	3,975	866	—	13	21	44	1,004	8	2,066
Rhode Island . . . . .	—	1	—	620	524	—	3	12	53	547	1	22
Connecticut . . . . .	—	7	2	1,812	1,305	2	23	11	84	1,115	1	89
MIDDLE ATLANTIC . . . . .	—	34	36	2,591	1,079	4	166	141	66	7,596	3	4,233
Upstate New York . . . . .	—	17	5	816	130	1	59	32	NN	NN	1	43
New York City *	—	2	3	928	388	3	34	43	14	4,649	2	48
New Jersey *	—	5	23	473	498	—	40	27	12	1,550	—	3,01
Pennsylvania *	—	10	5	374	63	—	33	39	40	1,397	—	29
EAST NORTH CENTRAL . . . . .	—	30	39	8,768	11,535	4	162	178	263	15,438	27	6,233
Ohio . . . . .	—	5	1	291	271	1	69	71	19	2,781	2	69
Indiana . . . . .	—	3	6	678	1,293	—	4	12	66	1,475	2	97
Illinois . . . . .	—	16	3	2,104	4,248	—	26	39	26	2,559	5	1,02
Michigan . . . . .	—	6	14	4,439	2,141	3	47	48	109	4,278	12	1,90
Wisconsin . . . . .	—	—	15	1,256	3,582	—	16	8	43	4,345	6	1,63
WEST NORTH CENTRAL . . . . .	—	8	—	451	1,008	2	93	82	70	5,116	—	1,23
Minnesota . . . . .	—	2	—	21	22	2	12	24	—	95	—	22
Iowa . . . . .	—	1	—	279	698	—	21	6	55	3,162	—	20
Missouri . . . . .	—	1	—	53	164	—	34	25	12	738	—	27
North Dakota . . . . .	—	1	—	65	57	—	3	—	2	71	—	27
South Dakota . . . . .	—	—	—	—	7	—	4	2	1	20	—	23
Nebraska . . . . .	—	1	—	6	23	—	10	9	—	161	—	14
Kansas . . . . .	—	2	—	27	37	—	9	16	—	869	—	95
SOUTH ATLANTIC . . . . .	2	35	2	1,262	2,253	3	201	257	70	7,018	6	2,216
Delaware . . . . .	—	—	—	9	53	—	1	1	1	275	—	14
Maryland . . . . .	1	6	—	13	15	—	27	39	12	655	1	11
District of Columbia . . . . .	1	2	—	8	2	—	4	11	2	141	—	3
Virginia . . . . .	—	8	—	422	69	2	40	57	7	726	2	629
West Virginia *	—	—	1	219	298	—	6	8	48	2,436	3	336
North Carolina . . . . .	—	7	—	4	37	—	42	30	NN	NN	—	202
South Carolina . . . . .	—	1	1	66	216	—	13	20	—	359	—	86
Georgia . . . . .	—	3	—	152	183	1	23	19	—	32	—	12
Florida . . . . .	---	8	---	369	1,380	---	45	72	---	2,394	---	923
EAST SOUTH CENTRAL . . . . .	—	14	12	629	1,071	3	111	91	79	5,038	31	1,410
Kentucky . . . . .	—	9	11	393	538	2	40	28	30	1,508	10	412
Tennessee . . . . .	—	—	—	165	194	—	42	29	43	2,356	13	578
Alabama . . . . .	—	5	1	13	154	1	16	20	5	704	4	201
Mississippi . . . . .	—	—	—	58	185	—	13	14	1	470	4	219
WEST SOUTH CENTRAL . . . . .	—	12	7	719	1,609	5	189	140	124	4,252	4	1,492
Arkansas . . . . .	—	—	—	70	13	—	13	12	1	392	—	112
Louisiana . . . . .	—	2	—	87	99	2	49	42	—	93	—	99
Oklahoma . . . . .	—	2	4	60	10	—	32	9	6	459	—	179
Texas . . . . .	—	8	3	502	1,487	3	95	77	117	3,308	4	1,102
MOUNTAIN . . . . .	—	11	51	895	1,928	—	34	30	23	2,590	4	2,420
Montana . . . . .	—	1	48	171	18	—	7	5	2	254	4	511
Idaho . . . . .	—	1	—	256	151	—	4	8	—	114	—	42
Wyoming . . . . .	—	—	—	81	51	—	—	1	2	429	—	7
Colorado . . . . .	—	2	—	107	534	—	11	5	9	517	—	1,553
New Mexico . . . . .	—	2	2	128	127	—	3	3	7	990	—	205
Arizona *	—	4	—	22	888	—	5	1	—	140	—	19
Utah . . . . .	—	1	1	129	158	—	2	6	3	137	—	79
Nevada . . . . .	—	—	—	1	1	—	2	1	—	9	—	4
PACIFIC . . . . .	1	62	17	2,342	4,444	1	198	199	160	10,128	37	3,980
Washington *	—	4	8	1,041	983	—	20	17	43	1,653	8	718
Oregon . . . . .	—	4	—	461	141	—	16	14	21	1,889	6	803
California . . . . .	1	51	9	755	3,209	—	154	157	74	5,479	23	2,424
Alaska . . . . .	—	2	—	65	13	1	8	8	22	831	—	9
Hawaii . . . . .	—	1	—	20	98	—	—	3	—	276	—	26
Guam . . . . .	—	—	—	52	16	—	—	13	—	28	—	14
Puerto Rico . . . . .	—	—	22	1,941	836	—	8	4	35	835	1	37
Virgin Islands . . . . .	—	—	—	7	3	—	—	2	—	25	—	2

\* Delayed Reports: Malaria: Pa. 3, Wash. 1  
Measles: N.H. 5, N.Y.C. 3, N.J. 8, Pa. 5, Ariz. 1, Wash. 6  
Meningococcal infections: N.J. 1, W.Va. 1

Mumps: Me. 1, N.Y.C. 13, N.J. 11, Pa. 35, Wash. 32  
Rubella: N.Y.C. 2, N.J. 1, Pa. 1, Wash. 10

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING NOVEMBER 10, 1973 AND NOVEMBER 11, 1972 (45th WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES .....	79	610	27,136	144	2	582	4	618	15,446	412	47	2,998
NEW ENGLAND .....	2	15	995	—	—	17	—	3	473	10	1	114
Maine *	—	2	93	—	—	—	—	—	51	—	1	61
New Hampshire .....	—	1	49	—	—	—	—	—	17	—	—	37
Vermont .....	—	—	27	—	—	—	—	—	—	—	—	3
Massachusetts .....	—	10	526	—	—	14	—	2	195	6	—	6
Rhode Island .....	1	—	83	—	—	—	—	—	41	—	—	1
Connecticut .....	1	2	217	—	—	3	—	1	169	4	—	6
MIDDLE ATLANTIC .....	7	132	5,315	—	—	60	—	34	2,673	104	—	50
Upstate New York .....	1	22	933	—	—	10	—	13	306	8	—	24
New York City*	3	33	1,963	—	—	22	—	4	963	53	—	—
New Jersey *	2	26	938	—	—	18	—	5	860	21	—	—
Pennsylvania*	1	51	1,481	—	—	10	—	12	544	22	—	26
EAST NORTH CENTRAL .....	13	65	3,990	3	1	46	—	19	1,947	29	11	290
Ohio .....	3	42	1,213	—	1	19	—	14	362	3	—	32
Indiana .....	4	—	502	—	—	1	—	—	264	4	1	53
Illinois .....	3	—	1,188	1	—	10	—	5	371	4	3	72
Michigan .....	1	23	1,010	2	—	13	—	—	732	16	3	10
Wisconsin *	2	—	77	—	—	3	—	—	218	2	4	123
WEST NORTH CENTRAL .....	6	28	1,136	17	—	25	—	24	738	8	13	944
Minnesota .....	—	—	135	—	—	5	—	2	146	1	5	351
Iowa .....	—	1	112	—	—	—	—	7	58	1	3	194
Missouri .....	5	21	548	16	—	12	—	8	312	6	—	89
North Dakota .....	1	—	36	—	—	—	—	—	12	—	1	140
South Dakota .....	—	1	78	—	—	1	—	1	53	—	—	81
Nebraska .....	—	2	74	—	—	1	—	2	44	—	—	3
Kansas .....	—	3	153	1	—	6	—	4	113	—	4	86
SOUTH ATLANTIC .....	18	86	5,373	18	—	249	2	306	2,839	87	4	269
Delaware*	—	1	85	—	—	—	—	8	68	5	—	4
Maryland .....	—	12	593	6	—	9	—	14	403	17	—	15
District of Columbia .....	—	7	260	—	—	—	—	—	268	20	—	—
Virginia .....	3	19	733	5	—	3	—	61	165	16	3	82
West Virginia*	1	3	257	—	—	11	—	4	57	1	—	22
North Carolina .....	—	13	866	2	—	5	2	140	607	13	—	13
South Carolina*	2	17	430	—	—	6	—	32	505	14	—	6
Georgia .....	2	14	875	3	—	3	—	46	766	1	1	88
Florida .....	10	---	1,274	2	---	212	---	1	---	---	---	39
EAST SOUTH CENTRAL .....	8	74	2,463	10	1	43	1	112	1,358	31	3	378
Kentucky .....	1	21	548	1	—	11	—	—	88	1	2	200
Tennessee .....	5	24	778	7	1	15	—	52	639	12	1	135
Alabama .....	2	22	689	—	—	10	1	27	367	6	—	42
Mississippi .....	—	7	448	2	—	7	—	33	264	12	—	1
WEST SOUTH CENTRAL .....	14	95	2,834	90	—	26	1	104	2,323	54	12	528
Arkansas*	1	—	338	62	—	5	—	20	96	4	1	110
Louisiana .....	4	30	410	1	—	6	—	—	526	12	4	47
Oklahoma .....	4	8	244	20	—	2	—	74	205	7	1	149
Texas .....	5	57	1,842	7	—	13	1	10	1,496	31	6	222
MOUNTAIN .....	—	22	919	4	—	14	—	8	463	13	—	50
Montana .....	—	1	46	—	—	—	—	1	32	—	—	10
Idaho .....	—	2	32	—	—	1	—	2	70	—	—	—
Wyoming .....	—	1	25	—	—	1	—	1	15	2	—	—
Colorado .....	—	8	181	—	—	2	—	1	187	2	—	—
New Mexico .....	—	1	191	1	—	4	—	3	125	8	—	7
Arizona .....	—	—	345	—	—	6	—	—	—	—	—	30
Utah .....	—	5	43	2	—	—	—	—	21	—	—	3
Nevada .....	—	4	56	1	—	—	—	—	13	1	—	—
PACIFIC .....	11	93	4,111	2	—	102	—	8	2,632	76	3	375
Washington*	3	6	318	1	—	7	—	5	261	4	—	9
Oregon .....	—	7	218	—	—	2	—	2	206	1	—	8
California .....	8	78	3,239	1	—	88	—	1	2,048	70	3	350
Alaska*	—	—	54	—	—	4	—	—	57	1	—	8
Hawaii .....	—	2	282	—	—	1	—	—	60	—	—	—
Guam .....	—	—	36	—	—	—	—	—	—	—	—	—
Puerto Rico .....	9	10	437	—	2	11	—	—	70	13	3	49
Virgin Islands .....	—	—	2	—	—	—	—	—	4	3	—	—

\* Delayed Reports: TB: N.Y.C. 34, N.J.-8, Pa. 21, Wash. 5, Alaska 10  
Tularemia: Ark. 2  
Typhoid: N.Y.C. 1, N.J. 3, Wis. delete 1, W.Va. 1

Gonorrhea: N.Y.C. 837, N.J. 292, Pa. 710, Wash. 214  
Syphilis: Me. 1, N.Y.C. 52, N.J. 33, Pa. 13, Wash. 1  
Rabies: Pa. 2, Del. 1, S.C. 1

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING NOVEMBER 10, 1973

Week No.

45

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

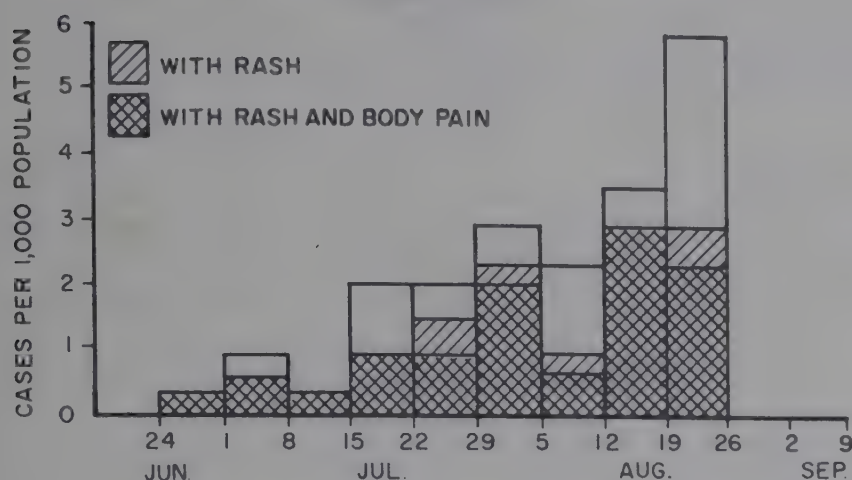
Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	675	408	21	40	SOUTH ATLANTIC	1,245	695	51	49
Boston, Mass.	210	96	8	16	Atlanta, Ga.	104	53	9	5
Bridgeport, Conn.	34	27	—	4	Baltimore, Md.	212	117	4	3
Cambridge, Mass.	24	16	1	4	Charlotte, N. C.	66	30	3	—
Fall River, Mass.	33	23	—	—	Jacksonville, Fla.	95	54	10	1
Hartford, Conn.	42	29	—	—	Miami, Fla.	120	65	5	6
Lowell, Mass.	26	19	—	4	Norfolk, Va.	65	37	3	4
Lynn, Mass.	26	21	—	2	Richmond, Va.	87	47	4	5
New Bedford, Mass.	23	18	—	1	Savannah, Ga.	47	28	2	4
New Haven, Conn.	73	38	6	1	St. Petersburg, Fla.	93	72	2	3
Providence, R. I.	40	25	1	5	Tampa, Fla.	76	40	4	5
Somerville, Mass.	6	5	—	—	Washington, D. C.	240	135	5	12
Springfield, Mass.	45	32	3	3	Wilmington, Del.	40	17	—	1
Waterbury, Conn.	35	23	—	—	EAST SOUTH CENTRAL	731	357	41	30
Worcester, Mass.	58	36	2	—	Birmingham, Ala.	98	45	8	2
MIDDLE ATLANTIC	2,938	1,800	113	150	Chattanooga, Tenn.	48	23	2	5
Albany, N. Y.	40	24	5	1	Knoxville, Tenn.	37	26	—	1
Allentown, Pa.	28	15	1	4	Louisville, Ky.	125	63	6	7
Buffalo, N. Y.	122	82	6	5	Memphis, Tenn.	193	90	7	5
Camden, N. J.	40	21	1	1	Mobile, Ala.	55	28	3	—
Elizabeth, N. J.	32	24	—	—	Montgomery, Ala.	55	26	3	9
Erie, Pa.	40	25	2	5	Nashville, Tenn.	120	56	12	1
Jersey City, N. J.	64	48	1	—	WEST SOUTH CENTRAL	1,263	665	71	43
Newark, N. J.	52	20	2	3	Austin, Tex.	32	21	—	4
New York City, N. Y.†	1,582	946	51	53	Baton Rouge, La.	78	39	7	2
Paterson, N. J.	50	30	3	5	Corpus Christi, Tex.	37	24	—	2
Philadelphia, Pa.	293	174	15	39	Dallas, Tex.	157	91	6	1
Pittsburgh, Pa.	153	91	8	9	El Paso, Tex.	51	20	3	2
Reading, Pa.	54	36	5	1	Fort Worth, Tex.	90	57	4	4
Rochester, N. Y.	124	90	5	8	Houston, Tex.	266	123	16	1
Schenectady, N. Y.	34	23	2	1	Little Rock, Ark.	57	33	5	5
Scranton, Pa.	43	30	2	4	New Orleans, La.	164	78	15	3
Syracuse, N. Y.	71	43	2	—	Oklahoma City, Okla.*	88	50	5	2
Trenton, N. J.	44	30	—	4	San Antonio, Tex.	126	67	8	6
Utica, N. Y.	23	15	—	3	Shreveport, La.	55	28	2	6
Yonkers, N. Y.	49	33	2	4	Tulsa, Okla.	62	34	—	5
EAST NORTH CENTRAL	2,491	1,420	105	66	MOUNTAIN	559	325	38	20
Akron, Ohio	60	36	3	—	Albuquerque, N. Mex.	41	23	3	5
Canton, Ohio	36	23	2	2	Colorado Springs, Colo.	26	20	—	1
Chicago, Ill.	646	366	28	22	Denver, Colo.	145	77	20	7
Cincinnati, Ohio	172	94	6	8	Las Vegas, Nev.	34	16	1	—
Cleveland, Ohio	186	92	6	2	Ogden, Utah	25	17	—	2
Columbus, Ohio	134	84	4	3	Phoenix, Ariz.	128	79	5	2
Dayton, Ohio	105	64	7	1	Pueblo, Colo.	27	16	1	3
Detroit, Mich.	326	169	10	2	Salt Lake City, Utah	63	40	5	—
Evansville, Ind.	44	30	1	2	Tucson, Ariz.	70	37	3	—
Fort Wayne, Ind.	64	34	5	5	PACIFIC	1,616	998	65	50
Gary, Ind.	17	8	1	—	Berkeley, Calif.	18	15	—	2
Grand Rapids, Mich.	56	32	2	4	Fresno, Calif.	50	31	5	2
Indianapolis, Ind.	151	80	12	—	Glendale, Calif.	33	22	—	2
Madison, Wis.	43	21	5	3	Honolulu, Hawaii	51	22	7	2
Milwaukee, Wis.	143	85	4	1	Long Beach, Calif.	109	63	4	3
Peoria, Ill.	51	39	2	—	Los Angeles, Calif.	435	274	10	12
Rockford, Ill.	37	25	—	5	Oakland, Calif.	56	36	2	—
South Bend, Ind.	42	28	—	4	Pasadena, Calif.	33	23	1	1
Toledo, Ohio	114	70	6	—	Portland, Oreg.	139	94	3	4
Youngstown, Ohio	64	40	1	2	Sacramento, Calif.	80	43	5	1
WEST NORTH CENTRAL	906	548	33	47	San Diego, Calif.	144	77	6	3
Des Moines, Iowa	68	46	1	2	San Francisco, Calif.	176	103	5	4
Duluth, Minn.	26	17	—	2	San Jose, Calif.	64	45	3	3
Kansas City, Kans.	40	26	—	5	Seattle, Wash.	137	87	13	5
Kansas City, Mo.	145	82	7	2	Spokane, Wash.	57	41	1	2
Lincoln, Nebr.	38	28	1	3	Tacoma, Wash.	34	22	—	4
Minneapolis, Minn.	90	60	4	5	Total	12,424	7,216	538	491
Omaha, Nebr.	110	49	8	1	Expected Number	12,596	7,248	543	427
St. Louis, Mo.	253	147	9	15	Cumulative Total (includes reported corrections for previous weeks)	576,623	338,900	21,710	23,119
St. Paul, Minn.	69	53	2	1					
Wichita, Kans.	67	40	1	11					

† Delayed report for week ending November 3, 1973

\* Estimate based on average percent of divisional total

## DENGUE-2 - Continued

Figure 3  
CASES OF FEBRILE ILLNESS, PER 1,000 POPULATION,  
BY DATE OF ONSET,  
BARRIO COLLORES, JUANA DIAZ, PUERTO RICO,  
JUNE-AUG. 1973



The dengue activity described in this preliminary report appears to be more explosive than the 1972 outbreak in Guanica-Ensenada (MMWR, Vol. 21, No. 44, and Vol. 22, No. 7). The febrile illness attack rate in Villalba was 390 per 1,000 inhabitants over a 3-1/2 month period, whereas in Guanica-Ensenada, it was 331 per 1,000 over a 5-1/2 month period. *A. aegypti* population indices were higher in Villalba than those observed in Guanica-Ensenada.

Foci of confirmed dengue transmission have now been identified in the towns of Coamo and San German. Mosquito control activities are in progress in these towns.

(Reported by Rodolfo Caballero, M.D., Francisco Loza-Diaz, M.D., physician, Elpidia Diaz, Nursing Supervisor, Villalba Health Center; the Puerto Rico Health Department; the San Juan Tropical Disease Laboratories, Vectorborne Disease Branch, Bureau of Laboratories, CDC.)

#### EPIDEMIOLOGIC NOTES AND REPORTS INFLUENZA - Australia, United Kingdom

##### Australia

A widespread epidemic of influenza A has been reported from Western Australia. The etiologic agent for this outbreak is similar to A/England/42/72.

##### United Kingdom

In late September and early October, an influenza outbreak associated with type A influenzavirus occurred in a boys' school in southern England. More than 100 boys were ill; 1 died with pneumonia. The etiologic agent for this outbreak appears to have been A/England/42/72.

In October, another influenza outbreak associated with type B virus occurred in a boys' school in northern England. Strains of influenza antigenically similar to the "intermediate strain" have been isolated.

In mid-October, a strain of influenza B similar to the B strains prevalent between 1967 and 1972 was isolated from a patient in Leicester.

(Reported by the World Health Organization: Weekly Epidemiological Record. 48(44):421, 2 Nov 1973.)

##### Editorial Note

No virologically confirmed cases of influenza have been reported this fall in the United States; however, symptoms of influenza are indistinguishable from those of a wide variety of viral infections, and many febrile upper respiratory illnesses that occur between October and March may be mistakenly called influenza. Specific diagnosis can be made only by viral isolation, but the presence of influenza can be determined by serologic methods.

#### FOLLOW-UP ON DIPHTHERIA ON A NAVAJO INDIAN RESERVATION - Arizona, New Mexico

Two deaths due to diphtheria have now been reported to the Indian Health Service from the Navajo Indian Reservation in Arizona and New Mexico (MMWR, Vol. 22, No. 41). These first fatalities together with 2 additional cases bring to 48 the total number of cases reported on the Reservation this year. Both deaths were in previously unimmunized adult Navajos from the Shiprock, New Mexico, area. Their histories are summarized below:

**Case 1:** A 32-year-old Indian man with a history of alcoholism was admitted to a local hospital on October 9, 1973, with fever, exudative tonsillitis, and lobar pneumonia. Treatment was begun with penicillin and gentamicin. On the second hospital day, diphtheria was suspected, and 80,000 units of antitoxin were given. Congestive heart failure was evident by the third hospital day, and an electrocardiogram showed sinus tachycardia and nonspecific T-wave changes. The patient was treated with diuretics and phlebotomy. Increasing respiratory distress necessitated intubation, which was followed by worsening hypotension and oliguria. The patient was trans-

ferred to another hospital where peritoneal dialysis was begun. The cardiac condition deteriorated further, with nodal bradycardia and subsequent ventricular arrest; all resuscitation efforts failed, and the patient died on October 18. Throat swab culture for *Corynebacterium diphtheriae* was negative, but autopsy disclosed a tracheal membrane and hemorrhagic myocarditis, consistent with diphtheria.

**Case 2:** A 41-year-old Indian woman with a history of alcoholism presented to the hospital on October 21, 1973, with low-grade fever and respiratory stridor. Examination of the pharynx revealed no cause for the stridor, and rhonchi were heard over both lung fields. The patient was scheduled for indirect laryngoscopy but had a respiratory arrest before the procedure could be done. During resuscitation efforts, a 2 x 10 cm membrane was extracted from the trachea. Diphtheria was diagnosed clinically, and the patient was given diphtheria antitoxin and penicillin. Soon after intubation, she developed a pneumothorax complicated by hypotension and oliguria. She died on October 23. Culture of the membrane

## DIPHTHERIA — Continued

grew out toxigenic *C. diphtheriae*, biotype intermedius. Autopsy disclosed a second necrotic membrane in the trachea; the heart appeared normal.

Both of these patients had been seen numerous times in several hospitals and clinics, but medical files showed no record of previous diphtheria immunization. The family contacts of the patients had negative cultures for *C. diphtheriae* and received penicillin intramuscularly. No contact between the 2 patients and other known cases of diphtheria was uncovered.

Control efforts continue on the Navajo Reservation and adjacent areas. Since the highest attack rates have been in adults, vaccination campaigns aimed at the adult Navajo population are being carried out in Gallup, Shiprock, and surrounding communities.

(Reported by Charles O. Garrison, M.D., Pathologist, Cortez, Colorado; Blythe Schroeder, M.D., Intern, John Ullrich, Ph.D., Hospital Pathologist, Bernalillo County Medical Center, Albuquerque; James Orme, M.D., Medical Officer, Taylor McKenzie, M.D., Director, Shiprock Service Unit, V. Alton Dohner, M.D., Deputy Area Director, Navajo Area, Indian Health Service; Wilhelm F. Rosenblatt, M.D., Chief, Communicable Disease Section, New Mexico State Health Agency; Philip M. Hotchkiss, D.V.M., State Epidemiologist, Arizona State Department of Health; and an EIS Officer.)

## Editorial Note

Although both of these adult patients had been seen several times in hospitals and outpatient clinics, they had a history of no immunization against diphtheria. Vaccination

of inadequately immunized adults, as might be accomplished in frequently used medical facilities, is particularly important in areas of high endemic diphtheria incidence.

Tetanus and diphtheria toxoid adsorbed, adult (Td), given in 3 separate injections (1) has been shown to be effective in initiating protective serum levels of diphtheria antitoxin (2,3,4), even in adults not previously immunized; in several published studies no significant problems with adverse reactions have been reported (2,3,4,5).

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## Erratum, Vol. 22, No. 30, p. 340

In the article, "Quarantine Measures," column 2, line 17, the following correction should be made:

Pennsylvania U.S. Public Health Service Outpatient Clinic  
19106  
Delete: Pittsburgh  
Insert: Philadelphia

The Morbidity and Mortality Weekly Report, circulation 36,000, is published by the Center for Disease Control, Atlanta, Ga.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to: Center for Disease Control  
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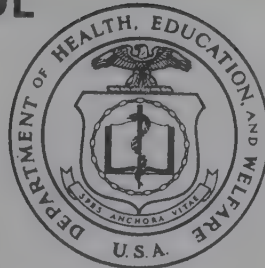


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# Morbidity and Mortality



Vol. 22, No. 46

WEEKLY  
REPORT

For  
Week Ending  
November 17, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE  
DATE OF RELEASE: NOVEMBER 23, 1973 — ATLANTA, GEORGIA 30333

## EPIDEMIOLOGIC NOTES AND REPORTS

### STAPHYLOCOCCAL FOOD POISONING ALOFT — Pennsylvania, Puerto Rico, New York

On October 10, 1973, 2 scheduled flights and 1 charter flight originating in Southern Europe landed in United States airports carrying large numbers of passengers acutely ill with gastrointestinal symptoms. The investigation of these outbreaks is summarized below.

**Outbreak 1.** Forty-seven (28%) of 170 tourist passengers on a flight originating in Rome experienced the sudden onset of severe vomiting, cramps, and in a few cases diarrhea 1-2 hours after eating a meal taken aboard in Lisbon; no fever was noted. Upon arrival in New York at 4:30 p.m., 35 of the 47 ill patients were briefly examined and released, 2 with severe prostration were admitted to a hospital for observation, and 10 were observed overnight in a hotel. All recovered uneventfully.

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**Outbreak 2.** On a second flight, also originating in Rome, lunch was served shortly after departure from Lisbon at 11:50 a.m. Beginning at 1:00 p.m. and continuing through the flight, 50 (55%) of the 91 tourist passengers experienced severe vomiting, chills, headache, and abdominal cramps; few had diarrhea. A physician on board reported that several older patients became cyanotic and required oxygen; a 4-year-old boy became hypotensive. After arrival in San

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	46th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 46 WEEKS		
	November 17, 1973	November 18, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	93	103	85	4,276	3,809	3,975
Brucellosis	1	5	3	165	172	190
Chickenpox	1,428	1,864	—	151,004	122,407	—
Diphtheria	6	7	7	167	104	167
Encephalitis, primary:						
Arthropod-borne and unspecified	48	29	28	1,399	1,017	1,276
Encephalitis, post-infectious	4	4	4	252	246	306
Hepatitis, serum (Hepatitis B)	154	169	169	7,168	7,987	6,501
Hepatitis, infectious (Hepatitis A)	1,039	1,143	1,143	45,663	48,668	48,668
Malaria	2	3	65	223	781	2,686
Measles (rubeola)	139	278	303	25,283	28,674	28,674
Meningococcal infections, total	17	20	19	1,221	1,189	2,181
Civilian	17	20	20	1,195	1,144	1,951
Military	—	—	1	26	45	211
Mumps	1,061	1,117	1,986	61,801	63,065	88,472
Rubella (German measles)	158	188	319	27,074	23,057	46,405
Tetanus	3	4	4	82	106	120
Tuberculosis, new active	572	646	—	27,731	30,138	—
Tularemia	4	4	1	148	122	138
Typhoid fever	14	14	6	596	338	338
Typhus, tick-borne (Rky. Mt. spotted fever)	4	2	2	621	512	397
Venereal Diseases:						
Gonorrhea	16,920	16,243	—	732,332	668,552	—
Syphilis, primary and secondary	489	589	—	22,684	22,511	—
Rabies in animals	47	54	53	3,049	3,657	3,038

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	7
Botulism:	17	Paralytic:	5
Congenital rubella syndrome:	30	Psittacosis: * N.Y. Ups.-1	24
Leprosy: Calif.-1, Tex.-1	114	Rabies in man:	1
Leptospirosis:	30	Trichinosis:	73
Plague:	2	Typhus, murine:	29

\* Delayed Reports: Psittacosis: Ariz.-1

## STAPHYLOCOCCAL POISONING – Continued

Juan at 4:50 p.m., 8 patients were hospitalized and responded well to intravenous fluids. No fever was reported. The median incubation period for hospitalized patients was 1½ hours. Stool specimens from 7 hospitalized patients were cultured. Five yielded no enteric pathogens; 2 were positive for *Staphylococcus aureus*, phage non-typable and resistant to penicillin.

**Outbreak 3.** The third flight, the chartered one, originated in Lisbon. From ½ to 2 hours after lunch was served, approximately 150 (84%) of the 179 passengers began to experience nausea, vomiting, and in a few cases diarrhea. The illness on board was reported as the plane landed in Philadelphia at 7:50 p.m.; further investigation could not be conducted at the time because the passengers had dispersed.

Passengers on the first 2 flights were served identical lunches which consisted of salad, chicken, vegetables, rolls, and custard dessert. All ill passengers questioned on the first flight had eaten the dessert, and one had consumed only coffee and dessert during the flight. Food histories obtained from 43 ill and well passengers on the second flight revealed a significant association between illness and eating the custard dessert ( $p < .005$ ); however, chicken could not be excluded as a vehicle (Table 1).

Table 1  
Food Consumption Histories Among Passengers  
on Second Flight, October 10, 1973

	Ate			Did Not Eat		
	Ill	Not Ill	Attack Rate (%)	Ill	Not Ill	Attack Rate (%)
Chicken	21	0	100	0	1	0
Salad	19	18	51	2	4	33
Custard	21	13	62	0	9	0*
Rolls and butter	17	15	53	4	7	36

\* $p < .005$  by Fisher's Exact Test

The lunch served to passengers aboard the third flight had a different entrée and vegetables but included the same custard dessert. On all 3 flights, first class passengers and crewmembers were served different lunches without the custard dessert; none experienced illness.

Results from several laboratories revealed  $10^5$ - $10^8$  colonies of *S. aureus* per gm of custard dessert from flights 1 and 2. Isolates from 4 dessert samples were phage non-typable and resistant to penicillin, as were isolates from the 2 patients on the flight to San Juan. No staphylococcal enterotoxin could be extracted directly from custard samples.

Epidemiologic investigation revealed that a catering facility located in Lisbon provided the lunches for these flights. The custard, Bavarois, is produced from egg yolk,

sugar, milk, gelatin, chocolate, gooseberry juice, and strawberry jelly; its preparation each morning requires several pouring and chilling steps during a 4-hour period; it is then packed into individual passenger trays and refrigerated in a holding area for 2½ hours until the plane is provisioned. The holding area temperature was noted to be 62°F and apparently had been so for several weeks; therefore, the total time which the custard was held at a temperature greater than 60°F was over 4 hours. Custard from the October 10th batch was kept in the holding area an additional 2½ hours for flight 3, which departed Lisbon later than flights 1 and 2.

The only other flight that departed Lisbon with the same dessert on October 10 also reported gastrointestinal illness subsequently, but few details are known.

The caterer had provided the same dessert for several daily westbound flights since October 3, apparently using the same method of preparing and storing the custard. It is not known whether outbreaks occurred on these other flights; none were reported.

(Reported by Joseph Constantino, M.D., Corporate Medical Director, Bruce H. Bennett, M.D., Medical Director, Miami Office, Pan American World Airways; Julio Borrás, M.D., Medical Director, Presbyterian Hospital, San Juan, Puerto Rico; Mary Ramirez, Chief, Department of Sanitary Bacteriology, Instituto de Laboratorios, Departamento de Salud, Puerto Rico; Robert A. Graves, Laboratory Manager, Miami Regional Laboratories, Florida Division of Health; the Food and Drug Administration; the San Juan Tropical Disease Laboratories, Bureau of Laboratories; the Quarantine Branch, the Enteric Disease Section, and the Epidemiologic Services Laboratory Section, Bacterial Diseases Branch, Bureau of Epidemiology, CDC.)

## Editorial Note

The finding of non-typable *S. aureus* of identical antibiogram in the incriminated custard and in 2 patients' stools confirms the diagnosis of staphylococcal food poisoning. There was evidence of opportunity for production of large amounts of enterotoxin in the custard, since it was held for more than 4 hours between 40 and 140°F. The type of enterotoxin produced by *S. aureus* isolated from the custard is being investigated.

It is interesting to note the apparently higher attack rate among passengers aboard the third flight; custard for that flight was stored 2½ hours longer than the custard for the first 2 flights.

Reporting of illness aboard 2 of the flights prior to landing allowed early investigation to exclude cholera on clinical and epidemiologic grounds. Such prompt reporting and close coordination between airlines and quarantine personnel are required in emergencies to assure appropriate care of passengers and to evaluate potential public health problems.

# INTERNATIONAL NOTES

## INFLUENZA – United Kingdom

In late September and October 1973, an influenza outbreak occurred in a girls' boarding school in the Midlands; 89 of 178 girls aged 11-18 years were affected. Ten strains of influenza B virus have been isolated so far. All are antigenically similar to B/HK/5/72.

In late October, another outbreak of influenza occurred in a boys' school in the Midlands. Ten influenza virus strains so far isolated have been identified as being similar to B/HK/5/72.

(Reported by the World Health Organization: Weekly Epidemiological Record 48(46):438, 16 Nov 1973)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING NOVEMBER 17, 1973 AND NOVEMBER 18, 1972 (46th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHtherIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
	1973	1973	1973	1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES .....	93	1	1,428	6	167	48	29	4	154	1,039	1,143
NEW ENGLAND .....	1	-	215	-	3	-	2	-	2	50	84
Maine * .....	-	-	3	-	-	-	-	-	-	-	14
New Hampshire * .....	-	-	28	-	-	-	-	-	1	4	6
Vermont .....	-	-	12	-	-	-	-	-	-	4	5
Massachusetts .....	-	-	106	-	1	-	-	-	-	23	37
Rhode Island .....	-	-	26	-	2	-	-	-	-	7	6
Connecticut .....	1	-	40	-	-	-	2	-	1	12	16
MIDDLE ATLANTIC .....	5	-	11	-	-	1	-	1	20	93	174
Upstate New York .....	1	-	1	-	-	-	-	1	1	27	40
New York City .....	3	-	8	-	-	-	-	-	3	14	41
New Jersey .....	-	-	NN	-	-	-	-	-	4	27	53
Pennsylvania .....	1	-	2	-	-	1	-	-	12	25	40
EAST NORTH CENTRAL .....	7	-	476	1	1	9	12	-	31	187	172
Ohio .....	4	-	94	1	1	4	2	-	9	38	34
Indiana .....	-	-	31	-	-	-	-	-	1	12	10
Illinois .....	-	-	-	-	-	3	2	-	9	47	46
Michigan .....	3	-	113	-	-	2	5	-	12	79	71
Wisconsin .....	-	-	238	-	-	-	3	-	-	11	11
WEST NORTH CENTRAL .....	9	1	195	-	7	18	3	-	2	45	30
Minnesota .....	6	-	74	-	-	-	-	-	-	3	3
Iowa .....	-	-	111	-	-	-	2	-	-	3	5
Missouri .....	2	-	4	-	-	17	-	-	1	13	14
North Dakota .....	-	-	4	-	-	-	1	-	-	-	2
South Dakota .....	-	-	-	-	7	-	-	-	-	12	1
Nebraska .....	1	1	2	-	-	1	-	-	-	1	3
Kansas .....	-	-	-	-	-	-	-	-	1	13	2
SOUTH ATLANTIC .....	35	-	122	-	5	7	1	-	17	243	163
Delaware .....	-	-	2	-	-	-	-	-	-	1	3
Maryland .....	1	-	3	-	-	3	-	-	3	17	20
District of Columbia .....	-	-	4	-	-	-	-	-	-	2	1
Virginia .....	25	-	1	-	-	-	-	-	2	10	11
West Virginia .....	-	-	107	-	-	-	-	-	-	9	13
North Carolina .....	1	-	NN	-	-	1	-	-	5	22	37
South Carolina .....	-	-	5	-	-	-	1	-	1	11	4
Georgia .....	-	-	-	-	-	-	-	-	-	39	25
Florida* .....	8	-	-	-	5	3	-	-	6	132	49
EAST SOUTH CENTRAL .....	13	-	107	-	1	7	3	1	12	48	102
Kentucky .....	-	-	12	-	-	-	-	-	2	13	24
Tennessee .....	1	-	NN	-	-	4	1	1	1	16	32
Alabama .....	10	-	2	-	1	2	-	-	8	16	44
Mississippi .....	2	-	93	-	-	1	2	-	1	3	2
WEST SOUTH CENTRAL .....	2	-	54	2	18	2	3	1	10	146	147
Arkansas * .....	-	-	3	-	-	-	-	-	-	1	7
Louisiana * .....	-	-	NN	-	1	-	-	-	-	18	29
Oklahoma .....	1	-	2	-	-	2	1	-	5	13	21
Texas .....	1	-	49	2	17	-	2	1	5	114	90
MOUNTAIN .....	-	-	35	2	47	-	-	-	-	31	56
Montana .....	-	-	26	-	-	-	-	-	-	14	4
Idaho .....	-	-	-	-	-	-	-	-	-	5	14
Wyoming .....	-	-	-	-	-	-	-	-	-	2	1
Colorado .....	-	-	7	-	-	-	-	-	-	3	7
New Mexico .....	-	-	2	2	27	-	-	-	-	3	15
Arizona * .....	-	-	-	-	20	-	-	-	-	-	10
Utah .....	-	-	-	-	-	-	-	-	-	3	5
Nevada* .....	-	-	-	-	-	-	-	-	-	1	-
PACIFIC .....	21	-	213	1	85	4	5	1	60	196	215
Washington .....	2	-	180	-	75	-	-	1	13	26	31
Oregon .....	-	-	-	1	4	-	-	-	5	21	26
California .....	18	-	-	-	4	3	5	-	38	137	134
Alaska .....	-	-	9	-	2	-	-	-	4	9	18
Hawaii .....	1	-	24	-	-	1	-	-	-	3	6
Guam* .....	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	-	2	-	-	-	-	-	1	13	24
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-

\* Delayed Reports: Aseptic meningitis: Me. 1, Fla. 7, Guam 1  
 Brucellosis: Ariz. 1  
 Chickenpox: Me. 23, Guam 1  
 Diphtheria: Fla. 4, Ariz. 1

Encephalitis, primary: N.H. 1  
 Hepatitis B: Fla. 11, Ark. 1, La. delete 3, Ariz. 1  
 Hepatitis A: Me. 4, Fla. 99, Ark. 1, La. delete 2,  
 Ariz. 12, Nev. 15, Guam 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING NOVEMBER 17, 1973 AND NOVEMBER 18, 1972 (46th WEEK) — Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	2	223	139	25,283	28,674	17	1,221	1,189	1,061	61,801	158	27,077
NEW ENGLAND .....	—	17	8	7,493	3,568	—	50	53	147	3,686	8	3,686
Maine *	—	—	—	68	250	—	1	4	5	405	—	77
New Hampshire .....	—	—	5	912	463	—	7	3	2	201	—	377
Vermont .....	—	2	—	120	128	—	3	—	—	274	—	47
Massachusetts *	—	7	2	3,960	898	—	13	23	39	1,043	5	2,066
Rhode Island .....	—	1	—	620	524	—	3	12	42	589	—	227
Connecticut .....	—	7	1	1,813	1,305	—	23	11	59	1,174	3	898
MIDDLE ATLANTIC .....	1	35	8	2,599	1,087	3	169	143	54	7,650	27	4,260
Upstate New York .....	—	17	2	818	132	1	60	33	NN	NN	23	462
New York City .....	—	2	—	928	394	2	36	43	18	4,667	2	482
New Jersey .....	—	5	—	473	498	—	40	27	28	1,578	—	3,015
Pennsylvania .....	1	11	6	380	63	—	33	40	8	1,405	2	301
EAST NORTH CENTRAL .....	—	30	46	8,814	11,639	5	166	180	322	15,760	46	6,278
Ohio *	—	5	3	294	275	3	71	72	116	2,897	4	703
Indiana .....	—	3	3	681	1,308	1	5	13	40	1,515	10	981
Illinois .....	—	16	7	2,111	4,264	1	27	39	54	2,613	8	1,036
Michigan .....	—	6	12	4,451	2,165	—	47	48	74	4,352	16	1,916
Wisconsin .....	—	—	21	1,277	3,627	—	16	8	38	4,383	8	1,642
WEST NORTH CENTRAL .....	—	8	5	456	1,024	—	93	86	94	5,210	2	1,236
Minnesota .....	—	2	1	22	23	—	12	24	2	97	—	221
Iowa .....	—	1	—	279	709	—	21	6	80	3,242	2	206
Missouri .....	—	1	—	53	166	—	34	26	3	741	—	273
North Dakota .....	—	1	2	67	58	—	3	—	1	72	—	277
South Dakota .....	—	—	2	2	8	—	4	2	—	20	—	23
Nebraska .....	—	1	—	6	23	—	10	10	8	169	—	141
Kansas .....	—	2	—	27	37	—	9	18	—	869	—	95
SOUTH ATLANTIC .....	—	35	6	1,272	2,266	3	205	261	117	7,160	24	2,261
Delaware .....	—	—	1	10	53	—	1	1	4	279	1	15
Maryland .....	—	6	—	13	15	—	27	39	20	675	—	11
District of Columbia .....	—	2	—	8	2	—	4	11	4	145	—	3
Virginia .....	—	8	—	422	71	1	41	58	10	736	—	629
West Virginia .....	—	—	3	222	300	—	6	8	34	2,470	2	338
North Carolina .....	—	7	—	4	38	—	42	31	NN	NN	—	202
South Carolina .....	—	1	—	66	217	—	13	22	5	364	—	86
Georgia .....	—	3	—	152	185	—	23	19	—	32	—	12
Florida *	—	8	2	375	1,385	2	48	72	40	2,459	21	965
EAST SOUTH CENTRAL .....	—	14	—	629	1,071	2	113	93	86	5,124	8	1,418
Kentucky .....	—	9	—	393	538	—	40	28	25	1,533	4	416
Tennessee .....	—	—	—	165	194	2	44	30	55	2,411	1	579
Alabama .....	—	5	—	13	154	—	16	20	6	710	—	201
Mississippi .....	—	—	—	58	185	—	13	15	—	470	3	222
WEST SOUTH CENTRAL .....	—	12	6	725	1,621	3	191	141	60	4,312	5	1,497
Arkansas .....	—	—	2	72	13	—	13	12	1	393	—	112
Louisiana *	—	2	—	87	105	—	48	43	—	93	—	99
Oklahoma .....	—	2	—	60	10	—	32	9	1	460	1	180
Texas .....	—	8	4	506	1,493	3	98	77	58	3,366	4	1,106
MOUNTAIN .....	—	9	40	933	1,935	1	36	30	36	2,626	7	2,427
Montana .....	—	1	40	211	18	—	7	5	2	256	—	511
Idaho .....	—	1	—	256	152	—	4	8	6	120	2	44
Wyoming .....	—	—	—	81	51	1	1	1	—	429	—	7
Colorado .....	—	2	—	107	535	—	11	5	4	521	3	1,556
New Mexico .....	—	2	—	128	129	—	3	3	4	994	1	206
Arizona *	—	2	—	20	891	—	6	1	—	140	—	19
Utah .....	—	1	—	129	158	—	2	6	20	157	1	80
Nevada .....	—	—	—	1	1	—	2	1	—	9	—	4
PACIFIC .....	1	63	20	2,362	4,463	—	198	202	145	10,273	31	4,011
Washington .....	—	4	2	1,043	984	—	20	17	38	1,691	9	727
Oregon .....	—	4	—	461	150	—	16	14	20	1,909	7	810
California .....	1	52	18	773	3,218	—	154	159	79	5,558	15	2,439
Alaska .....	—	2	—	65	13	—	8	9	8	839	—	9
Hawaii .....	—	1	—	20	98	—	—	3	—	276	—	26
Guam .....	—	—	—	52	16	—	—	13	—	28	—	14
Puerto Rico .....	—	—	16	1,957	891	—	8	4	9	844	1	38
Virgin Islands .....	—	—	—	7	3	—	—	2	6	31	—	2

\* Delayed Reports: Malaria: Ariz. delete 2  
Measles: Mass. delete 17, Fla. 4, Ariz. delete 2  
Meningococcal infections: Ohio delete 1, Fla. 1,  
La. delete 1, Ariz. 1

Mumps: Me. 18, Fla. 25  
Rubella: Me. 2, Fla. 21

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING NOVEMBER 17, 1973 AND NOVEMBER 18, 1972 (46th WEEK) - Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS			
		Cumulative 1973	1973		Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
											1973	1973		
UNITED STATES .....	82	572	27,731	148	14	596	4	621	16,920	489	47	3,049		
NEW ENGLAND .....	2	38	1,031	-	-	17	-	3	550	9	-	114		
Maine .....	-	2	95	-	-	-	-	-	28	-	-	61		
New Hampshire* .....	-	2	51	-	-	-	-	-	13	-	-	37		
Vermont .....	-	-	27	-	-	-	-	-	15	-	-	3		
Massachusetts .....	-	20	546	-	-	14	-	2	269	2	-	6		
Rhode Island * .....	1	8	89	-	-	-	-	-	56	-	-	1		
Connecticut .....	1	6	223	-	-	3	-	1	169	7	-	6		
MIDDLE ATLANTIC .....	7	108	5,423	-	5	65	-	34	1,961	104	1	51		
Upstate New York .....	1	27	960	-	-	10	-	13	276	7	1	25		
New York City .....	3	30	1,993	-	3	25	-	4	877	67	-	-		
New Jersey .....	2	19	957	-	2	20	-	5	267	16	-	-		
Pennsylvania .....	1	32	1,513	-	-	10	-	12	541	14	-	26		
EAST NORTH CENTRAL .....	13	64	4,054	3	3	49	-	19	2,047	20	3	293		
Ohio .....	3	10	1,223	-	1	20	-	14	736	7	-	32		
Indiana .....	4	8	510	-	-	1	-	-	430	8	-	53		
Illinois .....	3	35	1,223	1	1	11	-	5	112	1	-	72		
Michigan * .....	1	11	1,021	2	1	13	-	-	467	3	-	10		
Wisconsin* .....	2	-	77	-	-	4	-	-	302	1	3	126		
WEST NORTH CENTRAL .....	6	12	1,148	18	-	25	1	25	820	6	17	961		
Minnesota .....	-	-	135	-	-	5	-	2	140	-	10	361		
Iowa .....	-	1	113	-	-	-	-	7	59	-	3	197		
Missouri .....	5	7	555	17	-	12	1	9	200	6	-	89		
North Dakota .....	1	-	36	-	-	-	-	-	14	-	1	141		
South Dakota .....	-	1	79	-	-	1	-	1	64	-	-	81		
Nebraska .....	-	-	74	-	-	1	-	2	151	-	-	3		
Kansas .....	-	3	156	1	-	6	-	4	192	-	3	89		
SOUTH ATLANTIC .....	18	109	5,513	18	3	252	2	307	4,496	140	4	273		
Delaware .....	-	1	86	-	1	1	-	8	85	2	-	4		
Maryland .....	-	13	606	6	-	9	-	14	419	12	-	15		
District of Columbia .....	-	2	262	-	1	1	-	-	474	7	-	-		
Virginia * .....	3	17	750	5	-	3	1	61	471	16	2	84		
West Virginia .....	1	9	266	-	-	11	-	4	61	-	-	22		
North Carolina * .....	-	12	876	2	-	5	1	141	420	26	-	13		
South Carolina .....	2	10	440	-	-	6	-	32	461	37	-	6		
Georgia .....	2	14	889	3	-	3	-	46	858	8	-	88		
Florida * .....	10	31	1,338	2	1	213	-	1	1,247	32	2	41		
EAST SOUTH CENTRAL .....	8	61	2,524	10	-	43	1	113	1,446	35	4	382		
Kentucky .....	1	9	557	1	-	11	-	-	201	6	2	202		
Tennessee .....	5	12	790	7	-	15	-	52	470	11	2	137		
Alabama .....	2	21	710	-	-	10	1	28	497	9	-	42		
Mississippi .....	-	19	467	2	-	7	-	33	278	9	-	1		
WEST SOUTH CENTRAL .....	15	64	2,904	91	-	26	-	104	2,456	53	6	534		
Arkansas* .....	1	4	348	62	-	5	-	20	251	1	-	110		
Louisiana * .....	4	4	414	1	-	6	-	-	416	17	2	49		
Oklahoma .....	4	4	248	21	-	2	-	74	152	2	2	151		
Texas .....	6	52	1,894	7	-	13	-	10	1,637	33	2	224		
MOUNTAIN .....	-	27	925	6	-	14	-	8	751	16	-	54		
Montana .....	-	1	47	-	-	-	-	1	63	-	-	10		
Idaho .....	-	-	32	-	-	1	-	2	45	-	-	-		
Wyoming .....	-	1	26	2	-	1	-	1	5	1	-	-		
Colorado .....	-	-	181	-	-	2	-	1	194	7	-	-		
New Mexico .....	-	8	199	1	-	4	-	3	225	-	-	7		
Arizona * .....	-	11	335	-	-	6	-	-	144	5	-	34		
Utah .....	-	3	46	2	-	-	-	-	47	1	-	3		
Nevada .....	-	3	59	1	-	-	-	-	28	2	-	-		
PACIFIC .....	13	89	4,209	2	3	105	-	8	2,393	106	12	387		
Washington .....	3	2	320	1	-	7	-	5	239	1	-	9		
Oregon .....	-	2	220	-	-	2	-	2	93	-	-	8		
California .....	10	81	3,320	1	3	91	-	1	1,917	105	12	362		
Alaska .....	-	-	103	-	-	4	-	-	101	-	-	8		
Hawaii .....	-	4	246	-	-	1	-	-	43	-	-	-		
Guam* .....	-	-	36	-	-	-	-	-	-	-	-	-		
Puerto Rico .....	9	13	450	-	-	11	-	-	47	13	-	49		
Virgin Islands .....	-	-	2	-	-	-	-	-	5	-	-	-		

\* Delayed Reports: TB: R.I. delete 2, N.C. delete 2, Fla. 33,  
Ark. 6, Ariz. delete 21, Alaska 9  
Typhoid: Mich. delete 1, Wis. 1  
RMSF: Va. delete 1

Gonorrhea: N.H. 4, Fla. 998, La. delete 5, Guam 5  
Syphilis: N.H. 1, Fla. 42  
Rabies: Ariz. 4

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING NOVEMBER 17, 1973

Week No.

46

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	722	459	26	36	SOUTH ATLANTIC	1,260	694	46	55
Boston, Mass.	226	138	11	11	Atlanta, Ga.	167	85	2	6
Bridgeport, Conn.	42	29	2	4	Baltimore, Md.	226	120	16	3
Cambridge, Mass.	26	16	—	5	Charlotte, N. C.	63	37	4	—
Fall River, Mass.	36	28	—	—	Jacksonville, Fla.	99	49	1	1
Hartford, Conn.	62	34	3	1	Miami, Fla.	96	48	6	5
Lowell, Mass.	32	22	1	2	Norfolk, Va.	65	36	1	12
Lynn, Mass.	18	13	1	3	Richmond, Va.	108	63	3	9
New Bedford, Mass.	28	22	1	1	Savannah, Ga.	26	16	—	2
New Haven, Conn.	43	28	1	—	St. Petersburg, Fla.	91	65	1	5
Providence, R. I.	49	22	2	5	Tampa, Fla.	80	47	6	5
Somerville, Mass.	15	11	—	2	Washington, D. C.	185	94	5	5
Springfield, Mass.	55	37	1	—	Wilmington, Del.	54	34	1	2
Waterbury, Conn.	35	25	—	—	EAST SOUTH CENTRAL	755	416	44	43
Worcester, Mass.	55	34	3	2	Birmingham, Ala.	129	72	9	2
MIDDLE ATLANTIC	3,026	1,831	86	137	Chattanooga, Tenn.	61	34	2	2
Albany, N. Y.	47	30	3	—	Knoxville, Tenn.	44	32	1	—
Allentown, Pa.	29	20	1	5	Louisville, Ky.	149	91	9	15
Buffalo, N. Y.	151	86	4	9	Memphis, Tenn.	175	92	14	4
Camden, N. J.	31	15	1	—	Mobile, Ala.	55	27	2	6
Elizabeth, N. J.	38	19	2	—	Montgomery, Ala.	44	24	3	7
Erie, Pa.	41	22	2	2	Nashville, Tenn.	98	44	4	7
Jersey City, N. J.	48	30	1	5	WEST SOUTH CENTRAL	1,228	689	61	47
Newark, N. J.	80	40	4	2	Austin, Tex.	37	26	3	2
New York City, N. Y.†	1,502	956	29	48	Baton Rouge, La.	39	15	3	4
Paterson, N. J.	34	16	5	4	Corpus Christi, Tex.	26	16	1	1
Philadelphia, Pa.	400	237	17	35	Dallas, Tex.	175	89	9	2
Pittsburgh, Pa.	200	102	7	6	El Paso, Tex.	51	20	4	4
Reading, Pa.	49	32	—	1	Fort Worth, Tex.	87	50	1	3
Rochester, N. Y.	117	74	4	7	Houston, Tex.	206	102	11	5
Schenectady, N. Y.	28	13	1	4	Little Rock, Ark.	44	26	1	1
Scranton, Pa.	39	26	—	2	New Orleans, La.	154	78	5	2
Syracuse, N. Y.	94	51	2	3	Oklahoma City, Okla. *	86	52	4	2
Trenton, N. J.	33	18	1	—	San Antonio, Tex.	171	102	12	6
Utica, N. Y.	23	17	—	2	Shreveport, La.	60	44	5	5
Yonkers, N. Y.	42	27	2	2	Tulsa, Okla.	92	69	2	10
EAST NORTH CENTRAL	2,676	1,555	90	68	MOUNTAIN	468	255	25	19
Akron, Ohio	72	50	6	—	Albuquerque, N. Mex.	57	35	2	6
Canton, Ohio	38	25	1	—	Colorado Springs, Colo.	16	10	1	2
Chicago, Ill.	722	398	24	12	Denver, Colo.	94	48	7	—
Cincinnati, Ohio	175	103	5	2	Las Vegas, Nev.	30	15	1	1
Cleveland, Ohio	264	149	7	4	Ogden, Utah	11	8	—	1
Columbus, Ohio	136	72	4	2	Phoenix, Ariz.	132	67	8	2
Dayton, Ohio	103	61	4	2	Pueblo, Colo.	16	8	—	6
Detroit, Mich.	327	190	5	10	Salt Lake City, Utah	47	22	5	1
Evansville, Ind.	39	23	2	—	Tucson, Ariz.	65	42	1	—
Fort Wayne, Ind.	56	27	3	2	PACIFIC	1,709	1,097	46	47
Gary, Ind.	32	11	2	1	Berkeley, Calif.	20	13	1	2
Grand Rapids, Mich.	46	30	—	2	Fresno, Calif.	56	31	5	1
Indianapolis, Ind.	166	100	11	7	Glendale, Calif.	24	19	—	—
Madison, Wis.	51	24	6	7	Honolulu, Hawaii	56	30	2	1
Milwaukee, Wis.	137	92	1	2	Long Beach, Calif.	114	70	7	1
Peoria, Ill.	41	26	3	1	Los Angeles, Calif.	523	349	9	14
Rockford, Ill.	46	29	3	4	Oakland, Calif.	86	51	3	1
South Bend, Ind.	37	22	1	6	Pasadena, Calif.	54	39	—	4
Toledo, Ohio	109	76	1	2	Portland, Oreg.	146	105	4	4
Youngstown, Ohio	79	47	1	2	Sacramento, Calif.	63	40	4	2
WEST NORTH CENTRAL	830	523	33	37	San Diego, Calif.	121	67	3	—
Des Moines, Iowa	60	39	1	3	San Francisco, Calif.	166	106	3	5
Duluth, Minn.	20	12	—	3	San Jose, Calif.	48	29	—	1
Kansas City, Kans.	43	22	—	1	Seattle, Wash.	141	82	1	6
Kansas City, Mo.	134	82	9	3	Spokane, Wash.	62	45	3	4
Lincoln, Nebr.	33	27	1	1	Tacoma, Wash.	29	21	1	1
Minneapolis, Minn.	91	54	6	2	Total	12,674	7,517	457	489
Omaha, Nebr.	73	47	3	—	Expected Number	12,720	7,343	544	440
St. Louis, Mo.	254	161	10	15	Cumulative Total (includes reported corrections for previous weeks)	589,187	346,429	22,145	23,605
St. Paul, Minn.	73	46	2	3					
Wichita, Kans.	49	33	1	6					

† Delayed Report for week ending November 10, 1973

\* Estimate based on average percent of divisional total

### SURVEILLANCE SUMMARY SMALLPOX – Worldwide

Through November 13, 1973, a total of 101,823 cases of smallpox had been reported to the World Health Organization (WHO), the highest total of cases recorded during this period since 1967. Over 90% of the cases were reported by Bangladesh, 4 states of India, and 1 province of Pakistan, all of which have experienced widespread epidemics this year.

The seasonal peak in smallpox incidence occurred in the April-May period. In the following months, reported cases declined rapidly in all areas. The low point in the season was reached during September and the first weeks of October. At this time of year, outbreaks are normally the fewest in number, many having terminated spontaneously during the long summer monsoon period.

It was decided this year in the remaining endemic countries to take advantage of this natural decline in incidence and to embark in October on an intensified 3-month campaign. This campaign is designed to detect and eliminate as many as possible of the existing smallpox foci prior to the time that smallpox spreads most extensively. If this effort is successful, endemic areas should be sharply constricted and not so heavily infected as in recent years, thus permitting an increasing concentration of experienced personnel in ever smaller areas in the final phase of the program.

#### Bangladesh

In Bangladesh, 5 national medical officers and 4 WHO staff have been supplemented by 6 additional WHO staff, and the number of surveillance teams has been increased from 6 to 25. Prospects for interrupting transmission are more encouraging this year than they were last year. Extensive vaccination programs were conducted last spring which should help to reduce the extent of transmission. In addition, problems of population (and smallpox) movement this season due to food shortages are expected to be less of a problem as the November rice crop is predicted to be a record

one. Early results of the intensified effort are encouraging. Many foci which were present before the monsoon have terminated spontaneously, and despite far more intensive field surveillance, the number of cases detected has, as yet, shown no evidence of increasing.

#### Pakistan

In Pakistan, as well as in the 4 highly endemic states of India (Bihar, Madhya Pradesh, Uttar Pradesh, and West Bengal), all health personnel are participating in week-long village-by-village searches for cases throughout the states and provinces concerned. Such search operations are being conducted in October, November, and December. Immediately after outbreaks are found, containment teams move quickly in an effort to eliminate the foci discovered. Additional WHO staff have been recruited to assist in this effort, and 15 additional epidemiologists in India were specially recruited. Most search operations began only in mid- to late October, and thus only preliminary results are available.

#### Botswana

In Botswana, no subsequent smallpox cases have been discovered since the single case was reported in week 38. However, intensive epidemiologic studies have now turned up 2 additional cases in August and 1 each in June and July in a barely sustained chain of transmission which appears to relate to the January-April outbreaks among an anti-vaccination religious sect. A full report is awaited.

#### Importations

In Somalia, 2 cases were imported from Hararghe Province, Ethiopia; in the French Territory of the Afars and Issas, 1 case from Hararghe and a second case, whose source is uncertain, were imported from probably the same focus. In Nepal during October, 8 cases were detected, again originating from outbreaks in India.

*(Reported by the World Health Organization: Weekly Epidemiological Record 48(46):434-438, 16 Nov 1973)*

### TRICHINOSIS – United States, 1972

In 1972, 96 cases of trichinosis were reported to CDC from the United States. Infections ranged from mild to severe; 1 death occurred. Eight outbreaks involving at least 2 cases each were reported in 1972. One outbreak involved 4 persons, 7 outbreaks involved 2-3 persons each. The majority of infections were acquired from commercially prepared pork products consumed at home.

Sixty-six percent of the trichinosis cases were reported from New York, New Jersey, Illinois, and California; 21 of the 50 states reported at least 1 case in 1972. As observed in the past, the majority of trichinosis cases (70) were reported from 3 contiguous geographic areas of the United States: the New England, Middle Atlantic, and East North Central Regions.

Analysis of case reports on 90 patients in 1972 showed a median age of 26 years for males and 32 for females. The median age for all cases was 29. Sex distribution was nearly equal as observed in the preceding 5 years.

Examination of the 85 cases for which month of onset was known revealed no seasonal trend. Similarly, no seasonal pattern was recognized for the preceding 5 years.

In the 76 cases of trichinosis for which the source of infection was known, pork products were incriminated in 70 (92%). Sausage was implicated as the product responsible for infection in 28 (76%) of 37 reports naming a pork product.

*(Reported by the Parasitic Diseases Branch, Bureau of Epidemiology, CDC.)*

A copy of the original report from which these data were derived is available on request from  
Center for Disease Control  
Attn: Parasitic Diseases Branch,  
Bureau of Epidemiology  
Atlanta, Georgia 30333

EPIDEMIOLOGIC NOTES AND REPORTS  
FOLLOW-UP ON SHELLFISH-ASSOCIATED HEPATITIS –  
Southern United States

Approximately 265 clinical cases of viral hepatitis-A have now been identified resulting from the consumption of raw oysters during a 17-day period, September 20 through October 6. The majority of the cases occurred in Houston, Texas, where 250 persons were affected who ate at 9 different restaurants. Twenty-six of the cases resulting from exposure in Houston reside in 17 states. In Calhoun, Georgia, 15 of 150 persons attending a seafood dinner on September 21 and 22 became ill with hepatitis. Investigation revealed that all of the implicated oysters most likely originated from a single Louisiana oyster supplier.

The distribution of oyster shipments from the suspect supplier has been traced to only 6 states: Texas, Louisiana, Alabama, Georgia, Florida, and Tennessee. Surveillance of viral hepatitis has been established at the points of distribution of oyster shipments in these states and uncovered, in Texas, Louisiana, and Alabama, an additional 39 cases of hepatitis-A with a history of eating raw shellfish during September and October. Investigation continues to determine if these cases can be related to the current outbreak.

Evaluation of oyster procurement and the operations among Louisiana oyster suppliers is being conducted by state health authorities and the Food and Drug Administration. The investigation is focusing on the various oyster beds that were harvested during the month of September. The cause or source of the oyster contamination, however, is not yet apparent.

(Reported by Virginia Hamilton, M.D., District Medical Director, Gordon County, Georgia, Health Department; Thomas

McKinley, John D. Smith, Epidemiology Section, John E. McCroan, Ph.D., State Epidemiologist, Georgia Department of Human Resources; Frederick S. Wolf, M.D., State Epidemiologist, Alabama State Department of Health; Charles T. Caraway, D.V.M., State Epidemiologist, Louisiana State Department of Health; E. Charlton Prather, M.D., Chief, Bureau of Preventive Medicine Diseases, Florida Division of Health; Robert A. MacLean, M.D., Chief, Communicable Diseases Division, Houston Department of Public Health, M.S. Dickerson, M.D., State Epidemiologist, Texas State Department of Health; Robert H. Hutcheson, Jr., M.D., State Epidemiologist, Tennessee Department of Public Health; the Food and Drug Administration; the Viral Diseases Branch, Bureau of Epidemiology, CDC; and 6 EIS Officers.)

#### Editorial Note

A distinct seasonal incidence of hepatitis associated with the ingestion of raw shellfish from commercial sources has been reported (1). A rise in incidence begins in late fall with peak incidence occurring from January through March, followed by a gradual decline during the late spring. The U.S. coastal states appear to have a higher incidence of the disease. Analysis of cases has shown a preponderance among young adult males, commonly from middle and upper-middle socioeconomic classes. The appearance of cases of viral hepatitis-A bearing these epidemiological indices should alert health authorities to the possibility of a shellfish-related epidemic.

#### Reference

1. U.S. Center for Disease Control: Hepatitis Surveillance Rep 21:25-27, 31 Dec 1964

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to:

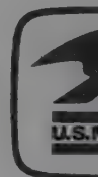
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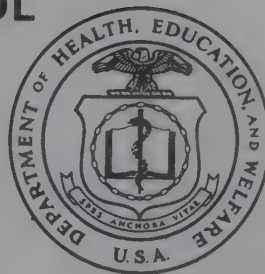
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# Morbidity and Mortality



Vol. 22, No. 47

WEEKLY  
REPORT

For  
Week Ending  
November 24, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE

DATE OF RELEASE: NOVEMBER 30, 1973 — ATLANTA, GEORGIA 30333

## EPIDEMIOLOGIC NOTES AND REPORTS WATERBORNE SHIGELLOSIS — Pennsylvania

On August 11, 1973, approximately 150 persons attended a wedding reception at a country club in Bucks County, Pennsylvania. Over the next 3 days, 90 of 119 persons interviewed developed a gastrointestinal illness characterized by nausea (76%), abdominal cramps (72%), diarrhea (66%), vomiting (44%), and fever (36%). Food-specific attack rates were significantly higher among persons who had consumed either of 2 of the 15 different food items served, water or string beans, than among those who had not (Table 1). Analysis of attack rates for persons who had either eaten string beans or drunk water, but not both, revealed that only water was independently significantly associated with illness ( $p < .02$ ). Stool specimens were obtained from 35 wedding reception guests, and 9 grew *Shigella sonnei*; all isolates were resistant to sulfathiazole.

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A questionnaire survey of 139 club members who frequently play golf at the country club but who did not attend the wedding reception was conducted to estimate the extent of illness outside the wedding reception guests. Sixty percent of the 113 golfers responding had experienced a gastrointestinal illness characterized by diarrhea (98%), abdominal cramps (79%), headache (54%), fever (46%), and vomiting (23%) in the previous 3 months; 73% had become ill between July 31 and August 14 (Figure 1). A history of drinking water from

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	47th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 47 WEEKS		
	November 24, 1973	November 25, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis . . . . .	77	85	81	4,358	3,894	4,056
Brucellosis . . . . .	1	1	5	166	173	196
Chickenpox . . . . .	1,152	2,129	— — —	152,182	124,536	— — —
Diphtheria . . . . .	7	2	6	175	106	173
Encephalitis, primary:						
Arthropod-borne and unspecified . . . . .	18	17	25	1,417	1,034	1,308
Encephalitis, post-infectious . . . . .	3	1	2	255	247	310
Hepatitis, serum (Hepatitis B) . . . . .	147	130	130	7,311	8,117	6,620
Hepatitis, infectious (Hepatitis A) . . . . .	1,034	873	1,051	46,716	49,541	49,541
Malaria . . . . .	5	5	39	228	786	2,712
Measles (rubeola) . . . . .	221	495	335	25,505	29,169	29,169
Meningococcal infections, total . . . . .	19	19	46	1,237	1,208	2,227
Civilian . . . . .	19	19	27	1,211	1,163	1,975
Military . . . . .	—	—	3	26	45	212
Mumps . . . . .	1,019	1,177	1,821	62,824	64,242	90,790
Rubella (German measles) . . . . .	125	209	319	27,199	23,266	46,700
Tetanus . . . . .	—	1	1	82	107	123
Tuberculosis, new active . . . . .	484	563	— — —	28,248	30,701	— — —
Tularemia . . . . .	1	5	5	149	127	141
Typhoid fever . . . . .	5	4	10	601	342	342
Typhus, tick-borne (Rky. Mt. spotted fever) . .	1	3	3	621	515	398
Venereal Diseases:						
Gonorrhea . . . . .	13,429	13,666	— — —	745,886	682,218	— — —
Syphilis, primary and secondary . . . . .	403	521	— — —	23,092	23,032	— — —
Rabies in animals . . . . .	31	48	48	3,079	3,705	3,089

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax: . . . . .	1	Poliomyelitis, total: . . . . .	7
Botulism: . . . . .	17	Paralytic: . . . . .	5
Congenital rubella syndrome: . . . . .	30	Psittacosis: . . . . .	24
Leprosy: Calif. 5 . . . . .	119	Rabies in man: . . . . .	1
Leptospirosis: Ida. 1, Mich. 1 . . . . .	32	Trichinosis: Conn. 1 . . . . .	74
Plague: . . . . .	2	Typhus, murine: . . . . .	29

## SHIGELLOSIS — Continued

Table 1  
Food-Specific Attack Rates Among Persons Attending  
Wedding Reception  
Bucks County, Pennsylvania — August 11, 1973

Food Item	Ate				Did Not Eat			
	Ill	Not Ill	Total	Attack Rate (Percent)	Ill	Not Ill	Total	Attack Rate (Percent)
Water	71	12	83	86	3	6	9	33*
String beans	71	14	85	84	3	4	7	43**
Fruit cup	60	15	75	80	14	3	17	82
Salad	62	15	77	81	12	3	15	80
Roll	58	14	72	81	16	4	20	80
Butter	68	14	82	83	6	4	10	60
Potato	70	16	86	81	4	2	6	67
Sour cream	30	7	37	81	44	11	55	80
Roast beef	73	18	91	80	1	0	1	100
Cheese	49	11	60	82	25	7	32	78
Pepperoni	47	12	59	80	27	6	33	82
Parfait	59	11	70	84	15	7	22	68
Cake	29	6	35	83	45	12	57	79
Tea	9	0	9	100	65	18	83	78
Coffee	38	11	49	78	36	7	43	84

\*p&lt;.001

\*\*p&lt;.05

fountains on the golf course was significantly associated with illness ( $p<.01$ ). At least 6 of the golfers who submitted stool specimens at the time of their illness had positive cultures for *S. sonnei*, resistant to sulfathiazole.

Water for the country club and the golf course fountains comes from an old, private, drilled well. The water is routinely chlorinated, but early in July 1973 the automatic chlorinator broke down and was not functioning at the time of the outbreak. Multiple cultures of the water supply at the club showed fecal coliforms, but numerous attempts to iso-

late *Shigella* were unsuccessful. Fluorescein dye tests did not demonstrate contamination of the well from nearby septic tanks.

More than 1,500 golfers played at the club between July 31 and August 14; based on the sample survey results, over 1,000 persons may have acquired shigellosis from the contaminated well.

(Reported by Rose A. Ionnatta, R.N., Director, Personal Health Services, Agnes Farrell, Supervisor, Public Health Nursing, Melvin Salzman, Environmental Specialist, Lower Bucks County; Mills Braunlich, Environmental Health Protection Specialist, Lee Thomas, Director, Bureau of Environmental Health, Edmund K. Lindemuth, M.D., Director, Bucks County Department of Health; Wallace E. Turner, Chief, Field Studies Section, Division of Laboratories, William E. Parkin, D.V.M., Chief, Epidemiology Section, W. D. Schrack, Jr., M.D., Director, Division of Communicable Diseases, Pennsylvania Department of Health; and an EIS Officer.)

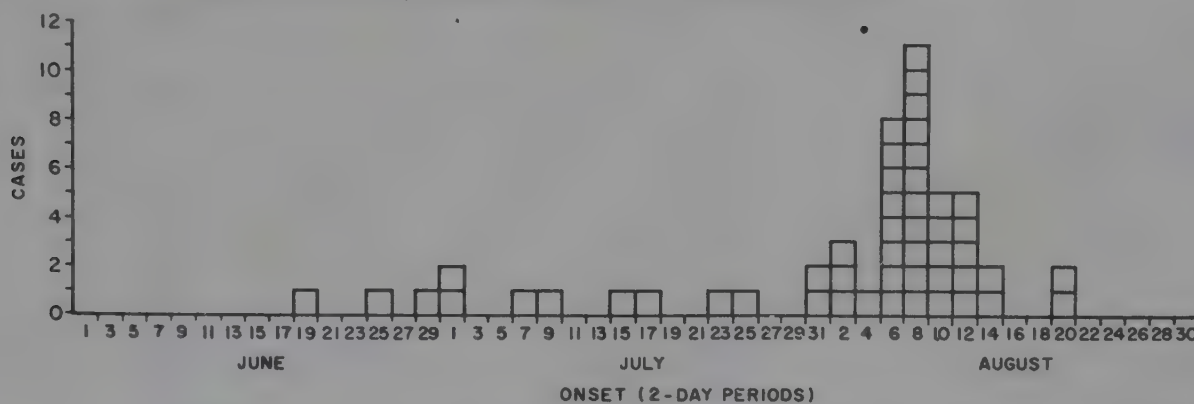
## Editorial Note

Although person-to-person transmission is the predominant mode of spread of shigellosis, waterborne outbreaks are not uncommon. Of 358 waterborne outbreaks reported to federal agencies between 1946 and 1970, 33 (9%) were caused by *Shigella* organisms (1). Most involved private water supplies and were caused by direct fecal contamination, back siphonage from a non-potable into a potable water system, or cross-connection between such systems (MMWR, Vol. 22, No. 3). As in this outbreak, despite strong epidemiologic evidence and positive isolates from affected individuals, it is unusual to isolate shigellae from implicated water (2, 3).

## References

1. Craun GF, McCabe LJ: Review of the causes of waterborne disease outbreaks. *Journal of the American Water Works Association* 65:74-84, 1973
2. Drachman RH, Payne FJ, Jenkins AA: An outbreak of waterborne shigella gastroenteritis. *Am J Hyg* 72:321-334, 1960
3. Green DM, Scott SS, Mowat DAE: Waterborne outbreak of viral gastroenteritis and sonne dysentery. *J Hyg (Camb)* 66:383-392, 1968

Figure 1  
GASTROENTERITIS CASES IN COUNTRY CLUB GOLFERS, BY DATE OF ONSET  
BUCKS COUNTY, PENNSYLVANIA — JUNE-AUGUST 1973



## VIRAL HEPATITIS IN YOUNG WOMEN AFTER EAR PIERCING — Washington

A complaint that soiled instruments were being used to pierce ears in a local jewelry store prompted an investigation of the practice of ear piercing in Seattle, Washington, during the first 6 months of 1973. Interviews with persons who underwent ear piercing and with those persons who performed the procedure revealed that instruments were not always sterilized adequately between procedures; aqueous zephiran and 70% alcohol were common disinfectants in use. Case

reports of viral hepatitis were subsequently examined for a possible association with the ear piercing procedure.

A review of the 702 cases of viral hepatitis reported in Seattle in 1972 disclosed that 48 cases had occurred in women (ages 12-24 years) who gave no history of exposure to another person with hepatitis or to other sources, such as hypodermic needles, raw oysters, illicit drugs, or transfusions. Each

(Continued on page 395)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING NOVEMBER 24, 1973 AND NOVEMBER 25, 1972 (47th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
	1973	1973	1973	1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES .....	77	1	1,152	7	175	18	17	3	147	1,034	873
NEW ENGLAND .....	1	-	230	-	3	-	-	-	1	33	77
Maine *	-	-	1	-	-	-	-	-	-	3	6
New Hampshire *	-	-	15	-	-	-	-	-	-	1	6
Vermont .....	-	-	9	-	-	-	-	-	-	4	7
Massachusetts .....	-	-	146	-	1	-	-	-	-	18	32
Rhode Island .....	1	-	20	-	2	-	-	-	1	3	8
Connecticut .....	-	-	39	-	-	-	-	-	-	4	18
MIDDLE ATLANTIC .....	14	-	16	-	-	1	1	-	18	85	143
Upstate New York .....	4	-	1	-	-	1	-	-	3	40	29
New York City .....	-	-	13	-	-	-	1	-	4	19	32
New Jersey .....	10	-	NN	-	-	-	-	-	4	13	34
Pennsylvania .....	-	-	2	-	-	-	-	-	7	13	48
EAST NORTH CENTRAL .....	13	-	392	-	1	7	8	-	10	134	147
Ohio *	5	-	26	-	1	2	2	-	-	18	30
Indiana .....	-	-	25	-	-	-	-	-	-	7	1
Illinois .....	-	-	-	-	-	2	-	-	2	32	39
Michigan .....	7	-	160	-	-	3	5	-	6	71	72
Wisconsin .....	1	-	181	-	-	-	1	-	2	6	5
WEST NORTH CENTRAL .....	4	-	142	-	7	7	3	1	3	47	14
Minnesota .....	-	-	12	-	-	-	-	-	-	1	4
Iowa .....	3	-	104	-	-	6	3	1	2	16	3
Missouri .....	1	-	3	-	-	1	-	-	-	13	2
North Dakota .....	-	-	10	-	-	-	-	-	-	-	1
South Dakota .....	-	-	-	-	7	-	-	-	-	9	-
Nebraska .....	-	-	3	-	-	-	-	-	-	1	-
Kansas .....	-	-	10	-	-	-	-	-	1	7	4
SOUTH ATLANTIC .....	27	1	57	3	8	-	1	-	34	204	139
Delaware .....	-	-	6	-	-	-	-	-	-	1	3
Maryland .....	-	-	1	-	-	-	-	-	16	18	16
District of Columbia .....	-	-	2	-	-	-	-	-	-	-	-
Virginia .....	6	-	-	-	-	-	-	-	2	8	18
West Virginia *	6	-	48	-	-	-	-	-	1	7	8
North Carolina .....	7	-	NN	-	-	-	1	-	1	11	21
South Carolina .....	1	-	-	-	-	-	-	-	-	15	7
Georgia .....	-	1	-	1	1	-	-	-	-	20	10
Florida .....	7	-	-	2	7	-	-	-	14	124	56
EAST SOUTH CENTRAL .....	4	-	19	-	1	-	-	1	5	48	54
Kentucky .....	1	-	19	-	-	-	-	-	1	11	11
Tennessee .....	3	-	NN	-	-	-	-	1	2	31	19
Alabama .....	-	-	-	-	1	-	-	-	1	5	12
Mississippi .....	-	-	-	-	-	-	-	-	1	1	12
WEST SOUTH CENTRAL .....	4	-	75	-	18	-	2	-	13	228	88
Arkansas *	-	-	2	-	-	-	1	-	-	2	6
Louisiana *	-	-	NN	-	1	-	-	-	-	-	7
Oklahoma .....	-	-	3	-	-	-	-	-	6	12	21
Texas .....	4	-	70	-	17	-	1	-	7	214	54
MOUNTAIN .....	-	-	78	2	50	-	-	-	4	81	63
Montana .....	-	-	25	-	-	-	-	-	-	6	14
Idaho .....	-	-	-	-	-	-	-	-	-	4	9
Wyoming .....	-	-	-	-	-	-	-	-	-	1	2
Colorado *	-	-	15	-	-	-	-	-	-	14	10
New Mexico .....	-	-	37	-	27	-	-	-	-	23	7
Arizona *	-	-	2	2	23	-	-	-	2	18	16
Utah .....	-	-	1	-	-	-	-	-	2	15	3
Nevada .....	-	-	-	-	-	-	-	-	-	-	2
PACIFIC .....	10	-	143	2	87	3	2	1	59	174	148
Washington .....	-	-	131	1	76	-	-	-	3	19	17
Oregon .....	-	-	-	-	4	-	-	-	6	19	35
California .....	10	-	-	1	5	3	2	1	49	134	93
Alaska .....	-	-	9	-	2	-	-	-	1	1	-
Hawaii .....	-	-	3	-	-	-	-	-	-	1	3
Guam *	-	-	-	-	-	-	-	-	-	-	2
Puerto Rico .....	-	-	-	-	-	-	-	-	1	12	5
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: N.H. 1, Ark. 1, La. 3  
Brucellosis: Ark. 1, Ariz. delete 1  
Chickenpox: Me. 17, N. H. 9, Guam 1

Hepatitis B: La. delete 2, Colo. delete 2, Guam 3  
Hepatitis A: Me. 9, Ohio delete 1, W. Va. delete 1,  
Ark 6, La. delete 1, Colo. 2, Ariz. 5

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING NOVEMBER 24, 1973 AND NOVEMBER 25, 1972 (47th WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	5	228	221	25,505	29,169	19	1,237	1,208	1,019	62,824	125	27,199
NEW ENGLAND .....	—	17	41	7,535	3,753	—	50	54	171	3,859	6	3,692
Maine* .....	—	—	—	69	252	—	1	4	8	415	—	72
New Hampshire* .....	—	—	35	948	512	—	7	3	10	211	—	379
Vermont .....	—	2	—	120	128	—	3	—	—	274	—	47
Massachusetts* .....	—	7	2	3,961	1,023	—	13	24	40	1,083	6	2,075
Rhode Island .....	—	1	4	624	525	—	3	12	54	643	—	221
Connecticut .....	—	7	—	1,813	1,313	—	23	11	59	1,233	—	898
MIDDLE ATLANTIC .....	1	36	40	2,639	1,095	3	172	144	54	7,704	7	4,267
Upstate New York .....	—	17	—	818	132	2	62	33	NN	NN	1	463
New York City .....	1	3	2	930	401	—	36	43	13	4,680	3	485
New Jersey .....	—	5	27	500	498	1	41	27	5	1,583	—	3,015
Pennsylvania .....	—	11	11	391	64	—	33	41	36	1,441	3	304
EAST NORTH CENTRAL .....	1	31	58	8,872	11,793	4	170	185	250	16,010	26	6,304
Ohio .....	—	5	—	294	280	3	74	74	13	2,910	1	704
Indiana .....	—	3	2	683	1,320	—	5	13	13	1,528	1	982
Illinois .....	1	17	15	2,126	4,305	—	27	39	40	2,653	4	1,040
Michigan .....	—	6	19	4,470	2,219	1	48	51	132	4,484	11	1,927
Wisconsin .....	—	—	22	1,299	3,669	—	16	8	52	4,435	9	1,651
WEST NORTH CENTRAL .....	—	8	—	456	1,104	1	94	88	125	5,335	—	1,236
Minnesota .....	—	2	—	22	23	—	12	24	—	97	—	221
Iowa .....	—	1	—	279	783	1	22	6	101	3,343	—	206
Missouri .....	—	1	—	53	169	—	34	26	7	748	—	273
North Dakota .....	—	1	—	67	58	—	3	—	3	75	—	277
South Dakota .....	—	—	—	2	11	—	4	2	—	20	—	23
Nebraska .....	—	1	—	6	23	—	10	10	10	179	—	141
Kansas .....	—	2	—	27	37	—	9	20	4	873	—	95
SOUTH ATLANTIC .....	1	36	21	1,293	2,279	2	207	267	87	7,247	14	2,275
Delaware .....	—	—	—	10	53	—	1	1	1	280	—	15
Maryland .....	1	7	—	13	15	—	27	39	4	679	—	11
District of Columbia .....	—	2	—	8	2	—	4	11	—	145	—	3
Virginia .....	—	8	3	425	71	2	43	60	6	742	2	631
West Virginia .....	—	—	2	224	300	—	6	8	44	2,514	1	339
North Carolina .....	—	7	—	4	38	—	42	32	NN	NN	—	202
South Carolina .....	—	1	4	70	217	—	13	22	2	366	—	86
Georgia .....	—	3	—	152	185	—	23	21	—	32	—	12
Florida .....	—	8	12	387	1,398	—	48	73	30	2,489	11	976
EAST SOUTH CENTRAL .....	—	14	2	631	1,076	2	115	94	55	5,179	21	1,439
Kentucky .....	—	9	1	394	539	—	40	29	17	1,550	—	416
Tennessee .....	—	—	—	165	194	—	44	30	29	2,440	12	591
Alabama .....	—	5	—	13	154	2	18	20	7	717	4	205
Mississippi .....	—	—	1	59	189	—	13	15	2	472	5	227
WEST SOUTH CENTRAL .....	1	13	6	731	1,640	4	192	143	85	4,399	7	1,504
Arkansas* .....	—	—	—	72	13	—	13	12	4	399	—	112
Louisiana* .....	—	2	—	87	105	—	45	44	—	93	—	99
Oklahoma .....	—	2	—	60	10	—	32	9	2	462	—	180
Texas .....	1	9	6	512	1,512	4	102	78	79	3,445	7	1,113
MOUNTAIN .....	—	9	20	953	1,945	1	37	30	46	2,672	8	2,435
Montana .....	—	1	12	223	18	1	8	5	13	269	4	515
Idaho .....	—	1	—	256	153	—	4	8	—	120	1	45
Wyoming .....	—	—	—	81	51	—	1	1	4	433	—	7
Colorado .....	—	2	1	108	537	—	11	5	15	536	—	1,556
New Mexico .....	—	2	5	133	131	—	3	3	14	1,008	3	209
Arizona .....	—	2	2	22	895	—	6	1	—	140	—	19
Utah .....	—	1	—	129	159	—	2	6	—	157	—	80
Nevada .....	—	—	—	1	1	—	2	1	—	9	—	4
PACIFIC .....	1	64	33	2,395	4,484	2	200	203	146	10,419	36	4,047
Washington .....	—	4	22	1,065	988	1	21	17	67	1,758	8	735
Oregon .....	—	4	—	461	159	—	16	14	14	1,923	3	813
California .....	1	53	11	784	3,226	1	155	160	48	5,606	15	2,454
Alaska .....	—	2	—	65	13	—	8	9	17	856	10	19
Hawaii .....	—	1	—	20	98	—	—	3	—	276	—	26
Guam .....	—	—	—	52	16	—	—	13	—	28	—	14
Puerto Rico .....	—	—	11	1,968	932	—	8	4	17	861	—	38
Virgin Islands .....	—	—	—	7	3	—	—	2	1	32	—	2

\*Delayed reports: Measles: Me. 1, N.H. 1, Mass. delete 1  
Meningococcal infections: La. delete 3  
Mumps: Me. 2, Ark. 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING NOVEMBER 24, 1973 AND NOVEMBER 25, 1972 (47th WEEK) – Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS			
		Cumulative 1973	1973		Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
											1973	1973		
UNITED STATES . . . . .	82	484	28,248	149	5	601	1	621	13,429	403	31	3,079		
NEW ENGLAND . . . . .	2	29	1,060	—	—	17	—	3	159	3	—	114		
Maine . . . . .	—	4	99	—	—	—	—	—	12	—	—	61		
New Hampshire . . . . .	—	1	52	—	—	—	—	—	12	1	—	37		
Vermont . . . . .	—	2	29	—	—	—	—	—	13	—	—	3		
Massachusetts . . . . .	—	13	559	—	—	14	—	2	—	2	—	6		
Rhode Island . . . . .	1	—	89	—	—	—	—	—	23	—	—	1		
Connecticut . . . . .	1	9	232	—	—	3	—	1	99	—	—	6		
MIDDLE ATLANTIC . . . . .	7	92	5,515	—	—	65	1	35	2,000	90	—	51		
Upstate New York . . . . .	1	13	973	—	—	10	—	13	319	2	—	25		
New York City . . . . .	3	42	2,035	—	—	25	—	4	803	53	—	—		
New Jersey . . . . .	2	16	973	—	—	20	—	5	482	22	—	—		
Pennsylvania . . . . .	1	21	1,534	—	—	10	1	13	396	13	—	26		
EAST NORTH CENTRAL . . . . .	13	80	4,167	3	—	49	—	19	1,751	17	3	296		
Ohio . . . . .	3	17	1,240	—	—	20	—	14	502	4	—	32		
Indiana . . . . .	4	16	526	—	—	1	—	—	160	3	—	53		
Illinois*. . . . .	3	31	1,287	1	—	11	—	5	273	1	—	72		
Michigan . . . . .	1	16	1,037	2	—	13	—	—	575	6	—	10		
Wisconsin . . . . .	2	—	77	—	—	4	—	—	241	3	3	129		
WEST NORTH CENTRAL . . . . .	6	22	1,170	18	2	27	—	25	673	12	7	968		
Minnesota . . . . .	—	4	139	—	2	7	—	2	148	3	2	363		
Iowa . . . . .	—	2	115	—	—	—	—	7	142	—	—	197		
Missouri . . . . .	5	15	570	17	—	12	—	9	192	9	1	90		
North Dakota . . . . .	1	—	36	—	—	—	—	—	7	—	1	142		
South Dakota . . . . .	—	1	80	—	—	1	—	1	27	—	—	81		
Nebraska . . . . .	—	—	74	—	—	1	—	2	84	—	—	3		
Kansas . . . . .	—	—	156	1	—	6	—	4	73	—	3	92		
SOUTH ATLANTIC . . . . .	18	103	5,616	18	—	252	—	307	3,235	100	2	275		
Delaware . . . . .	—	1	87	—	—	1	—	8	12	—	—	4		
Maryland . . . . .	—	15	621	6	—	9	—	14	336	11	—	15		
District of Columbia . . . . .	—	7	269	—	—	1	—	—	297	14	—	—		
Virginia . . . . .	3	9	759	5	—	3	—	61	408	15	2	86		
West Virginia . . . . .	1	7	273	—	—	11	—	4	62	2	—	22		
North Carolina . . . . .	—	16	892	2	—	5	—	141	446	6	—	13		
South Carolina . . . . .	2	17	457	—	—	6	—	32	220	12	—	6		
Georgia . . . . .	2	10	899	3	—	3	—	46	363	4	—	88		
Florida . . . . .	10	21	1,359	2	—	213	—	1	1,091	36	—	41		
EAST SOUTH CENTRAL . . . . .	8	38	2,562	10	—	43	—	112	1,032	31	5	387		
Kentucky . . . . .	1	10	567	1	—	11	—	—	147	18	1	203		
Tennessee . . . . .	5	16	806	7	—	15	—	52	453	11	4	141		
Alabama . . . . .	2	9	719	—	—	10	—	28	232	1	—	42		
Mississippi*. . . . .	—	3	470	2	—	7	—	32	200	1	—	1		
WEST SOUTH CENTRAL . . . . .	15	37	2,941	91	—	26	—	104	1,948	47	5	539		
Arkansas . . . . .	1	1	349	62	—	5	—	20	109	2	3	113		
Louisiana*. . . . .	4	—	414	1	—	6	—	—	372	11	—	49		
Oklahoma . . . . .	4	2	250	21	—	2	—	74	110	—	—	151		
Texas . . . . .	6	34	1,928	7	—	13	—	10	1,357	34	2	226		
MOUNTAIN . . . . .	—	13	938	7	—	14	—	8	411	10	—	53		
Montana . . . . .	—	1	48	—	—	—	—	1	7	1	—	10		
Idaho . . . . .	—	—	32	—	—	1	—	2	19	—	—	—		
Wyoming . . . . .	—	1	27	2	—	1	—	1	6	—	—	—		
Colorado . . . . .	—	—	181	—	—	2	—	1	167	3	—	—		
New Mexico . . . . .	—	4	203	2	—	4	—	3	56	—	—	7		
Arizona*. . . . .	—	7	342	—	—	6	—	—	106	1	—	33		
Utah . . . . .	—	—	46	2	—	—	—	—	17	—	—	3		
Nevada . . . . .	—	—	59	1	—	—	—	—	33	5	—	—		
PACIFIC . . . . .	13	70	4,279	2	3	108	—	8	2,220	93	9	396		
Washington . . . . .	3	3	323	1	—	7	—	5	237	—	—	9		
Oregon . . . . .	—	3	223	—	—	2	—	2	118	—	—	8		
California . . . . .	10	58	3,378	1	3	94	—	1	1,785	93	9	371		
Alaska . . . . .	—	—	103	—	—	4	—	—	36	—	—	8		
Hawaii . . . . .	—	6	252	—	—	1	—	—	44	—	—	—		
Guam*. . . . .	—	—	36	—	—	—	—	—	—	—	—	—		
Puerto Rico . . . . .	9	8	458	—	—	11	—	—	52	6	3	52		
Virgin Islands . . . . .	—	—	2	—	—	—	—	—	5	2	—	—		

\*Delayed reports: TB: Ill. 3

RMSF: Miss. delete 1

Gonorrhea: La. delete 6, Ariz. 131, Guam 13

Syphilis: Ariz. 5, Guam 1

Rabies in animals: Ariz. delete 1

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING NOVEMBER 24, 1973

Week No.  
47

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	640	396	18	38	SOUTH ATLANTIC	963	516	37	28
Boston, Mass.	182	100	6	12	Atlanta, Ga.	170	75	13	6
Bridgeport, Conn.	41	24	1	4	Baltimore, Md.	236	145	7	—
Cambridge, Mass.	25	17	—	5	Charlotte, N. C.	51	26	2	—
Fall River, Mass.	31	20	—	1	Jacksonville, Fla.	70	32	2	—
Hartford, Conn.	53	37	2	1	Miami, Fla.	61	35	—	4
Lowell, Mass.	23	16	—	3	Norfolk, Va.	48	28	1	2
Lynn, Mass.	20	10	—	1	Richmond, Va.	85	40	5	3
New Bedford, Mass.	22	18	1	1	Savannah, Ga.	25	11	1	4
New Haven, Conn.	59	30	4	—	St. Petersburg, Fla.	64	47	—	2
Providence, R. I.	54	31	2	3	Tampa, Fla.	45	27	5	4
Somerville, Mass.	16	15	—	2	Washington, D. C.	71	27	1	1
Springfield, Mass.	37	28	1	3	Wilmington, Del.	37	23	—	2
Waterbury, Conn.	32	22	—	—	EAST SOUTH CENTRAL	484	266	20	18
Worcester, Mass.	45	28	1	2	Birmingham, Ala.	92	42	4	1
MIDDLE ATLANTIC	2,883	1,757	87	134	Chattanooga, Tenn.	43	18	1	2
Albany, N. Y.	43	22	2	1	Knoxville, Tenn.	36	32	—	—
Allentown, Pa.	28	19	1	—	Louisville, Ky.	61	32	4	5
Buffalo, N. Y.	91	50	3	4	Memphis, Tenn.	90	48	3	2
Camden, N. J.	33	18	3	1	Mobile, Ala.	40	24	1	2
Elizabeth, N. J.	17	14	—	—	Montgomery, Ala.	24	13	2	—
Erie, Pa.	40	23	2	5	Nashville, Tenn.	98	57	5	6
Jersey City, N. J.	66	39	1	3	WEST SOUTH CENTRAL	880	480	43	27
Newark, N. J.	52	25	4	1	Austin, Tex.	26	17	1	4
New York City, N. Y.†	1,605	976	48	47	Baton Rouge, La.	24	13	1	—
Paterson, N. J.	43	28	1	1	Corpus Christi, Tex.	33	16	2	—
Philadelphia, Pa.	291	164	9	32	Dallas, Tex.	138	68	10	—
Pittsburgh, Pa.	189	107	6	19	El Paso, Tex.	28	19	—	1
Reading, Pa.	36	25	—	2	Fort Worth, Tex.	53	31	2	4
Rochester, N. Y.	124	89	2	10	Houston, Tex.	166	69	7	3
Schenectady, N. Y.	32	24	—	—	Little Rock, Ark.	41	22	5	2
Scranton, Pa.	45	32	1	1	New Orleans, La.	144	94	5	2
Syracuse, N. Y.	65	47	3	—	Oklahoma City, Okla.*	62	36	3	1
Trenton, N. J.	26	17	—	1	San Antonio, Tex.	81	42	5	1
Utica, N. Y.	20	14	—	2	Shreveport, La.	36	25	—	4
Yonkers, N. Y.	37	24	1	4	Tulsa, Okla.	48	28	2	5
EAST NORTH CENTRAL	2,186	1,246	98	80	MOUNTAIN	497	301	27	9
Akron, Ohio	43	29	—	—	Albuquerque, N. Mex.	29	17	4	—
Canton, Ohio	45	30	1	2	Colorado Springs, Colo.	26	14	1	2
Chicago, Ill.	606	327	27	13	Denver, Colo.	123	72	8	1
Cincinnati, Ohio	134	78	5	5	Las Vegas, Nev.	37	18	3	—
Cleveland, Ohio	150	84	6	4	Ogden, Utah	30	15	—	1
Columbus, Ohio	139	80	4	11	Phoenix, Ariz.	119	79	6	2
Dayton, Ohio	75	37	6	3	Pueblo, Colo.	26	19	—	2
Detroit, Mich.	301	176	13	13	Salt Lake City, Utah	54	34	3	—
Evansville, Ind.	41	27	—	4	Tucson, Ariz.	53	33	2	1
Fort Wayne, Ind.	25	11	2	—	PACIFIC	1,349	831	42	29
Gary, Ind.	44	13	3	3	Berkeley, Calif.	12	10	—	—
Grand Rapids, Mich.	50	29	2	3	Fresno, Calif.	47	28	—	—
Indianapolis, Ind.	148	80	9	4	Glendale, Calif.	22	20	—	1
Madison, Wis.	31	17	1	6	Honolulu, Hawaii	43	20	2	—
Milwaukee, Wis.	102	69	12	1	Long Beach, Calif.	104	62	1	3
Peoria, Ill.	29	14	2	—	Los Angeles, Calif.	390	229	15	6
Rockford, Ill.	34	20	2	3	Oakland, Calif.	55	34	3	—
South Bend, Ind.	25	19	—	3	Pasadena, Calif.	19	16	—	—
Toledo, Ohio	103	71	2	—	Portland, Oreg.	122	86	2	2
Youngstown, Ohio	61	35	1	2	Sacramento, Calif.	63	35	2	—
WEST NORTH CENTRAL	703	430	26	35	San Diego, Calif.	98	64	4	1
Des Moines, Iowa	52	31	2	2	San Francisco, Calif.	152	92	4	3
Duluth, Minn.	21	11	—	2	San Jose, Calif.	51	30	4	2
Kansas City, Kans.	23	11	—	1	Seattle, Wash.	95	57	3	5
Kansas City, Mo.	100	63	3	1	Spokane, Wash.	35	24	1	4
Lincoln, Nebr.	25	19	—	4	Tacoma, Wash.	41	24	1	2
Minneapolis, Minn.	94	64	5	2	Total	10,585	6,223	398	398
Omaha, Nebr.	72	40	3	2	Expected Number	12,849	7,442	545	454
St. Louis, Mo.	202	120	12	14	Cumulative Total (includes reported corrections for previous weeks)	599,877	352,674	22,562	24,002
St. Paul, Minn.	65	47	—	3					
Wichita, Kans.	49	24	1	4					

†Delayed Report for Week ending November 17, 1973

\*Estimate based on average percent of divisional total.

## VIRAL HEPATITIS — Continued

of the 48 young women was interviewed by telephone to determine if her ears had been pierced before the onset of disease and if the time interval was consistent with the incubation period of hepatitis-A or hepatitis-B. Seven of the 48 women had had their ears pierced within 6 months before onset of jaundice and in only one was this interval from piercing to onset less than 3½ months; in this single instance the interval was 2 weeks. None of these 7 women had had hepatitis-B antigen determinations performed when they were ill with viral hepatitis, and their illnesses could not be further classified as either hepatitis-A or hepatitis-B on the basis of clinical or epidemiologic information.

In order to ascertain the frequency of ear piercing in women this age, 100 women (14-24 years) were surveyed consecutively as they visited a local family planning clinic; only 1 had had her ears pierced in the previous 7 months.

A frequency of 7 (15%) of 48 women having the ear piercing procedure within this period before onset of viral hepatitis compared with an expected frequency of 1% demonstrates a statistically significant association between viral hepatitis and ear piercing ( $p < 0.001$ ). In addition, 2 of the 7 ill women had their ears pierced at the same establishment and had no other recognized contact. Differences in ear piercing frequency between the 2 groups could not be explained by large differences in age distributions since the mean age of the 48 ill young women (16.5 years) is only 2.4 years less than the mean age of the controls (18.9 years). The use of inadequately sterilized instruments suggests that these instruments may have transmitted hepatitis virus infection from one person to another.

Surveillance for cases of viral hepatitis spread by instruments used in ear piercing is being continued, and physicians and jewelers in the community are being advised to use disposable equipment or to sterilize effectively reusable equipment. (Reported by Carl J. Johnson, M.D., North District Health Officer, Herb Anderson, R.S., Environmental Epidemiologist, Jean Spearman, R.N., P.H.N., Epidemiologist, Julia Madsen,

R.N., Clinic Nurse, Seattle-King County Department of Public Health.)

## Editorial Note

Although outbreaks of viral hepatitis have been related to tattooing (1), this is the first report of an association between viral hepatitis and ear piercing. In spite of possible limitations in selection of a comparison group (the 2 groups of women were of similar ages but because of differing socioeconomic, cultural, or geographical backgrounds might not have had the same tendency to have their ears pierced) this report emphasizes that when instruments penetrate the skin and are used on more than 1 person, there is a danger of transmitting either hepatitis-A or hepatitis-B infection. Six of these cases had incubation periods compatible with hepatitis-B (approximately 6 weeks to 6 months) while the seventh had an incubation period possibly compatible with hepatitis-A (approximately 2 to 6 weeks).

At present there is virtually no regulation of ear piercing by most state or local health departments, and judging from the above report there may be inadequate appreciation of proper sterilization techniques to prevent the spread of hepatitis. Destruction of the hepatitis-B virus and probably the hepatitis-A virus can be achieved by heating instruments at 60° C. for 10 hours, 98° C. for 1 minute, boiling for 20 minutes, or autoclaving at 121° C. for 15 minutes (2). Destruction of the hepatitis-A virus and perhaps the hepatitis-B virus can probably be achieved with a solution of 0.5%-1.0% sodium hypochlorite (3). Because of their demonstrated effectiveness against other viruses, including some other enteroviruses, 2% glutaraldehyde, 10% formalin, and ethylene oxide gas have empirically been used for sterilizing materials contaminated with hepatitis viruses A and B.

## References

1. Mowat NAG, Albert-Recht F, Brunt PW, et al: Outbreak of serum hepatitis associated with tattooing. *Lancet* 1:33-34, 1973
2. Cossart YE: Epidemiology of serum hepatitis. *Brit Med Bull* 28:156-162, 1972
3. Neefe JR, Stokes J, Baty JB, et al: Disinfection of water containing causative agent of infectious (epidemic) hepatitis. *JAMA* 128:1076-1080, 1945

## WOUND BOTULISM — Colorado

On August 19, 1973, a 19-year-old man from Nebraska injured his left hand after he was thrown onto a dirt road from his car in an automobile accident. The back of his hand and wrist was lacerated and abraded, and the left fourth finger was traumatically avulsed. The patient was taken to a nearby hospital where his wound was debrided, the fourth finger removed at the proximal I-P joint, and a skin graft placed over the wound. Intravenous Keflin\* therapy, 1 gm 4 times a day, was given for 4 days and was followed by a 3-day course of oral ampicillin.

On August 26, the patient complained of neurologic symptoms including diplopia, dizziness, and slurred speech. The following day he had difficulty swallowing. His wound at this time appeared clean. On August 30, because of his neurologic symptoms, the patient was transferred to a Denver hospital. On admission he was noted to have bilateral ptosis, nystagmus, and weakness of his tongue and neck flexor and limb muscles. His sensorium was clear. Cerebrospinal fluid examination and a Tensilon\* test were normal. A diagnosis of

wound botulism was made, and the patient was placed on intravenous aqueous penicillin therapy, 2 million units every 4 hours, for 7 days.

Serum obtained from the patient did not have botulinal toxin; accordingly, botulinal antitoxin was not given. Culture of necrotic tissue obtained from the wound on August 30 subsequently grew *Staphylococcus* and *Pseudomonas* organisms. No anaerobic organisms were isolated.

The patient underwent a tracheostomy on his second hospital day because of respiratory distress. Repetitive nerve stimulation studies performed on the sixth day of hospitalization were normal; however, repeat studies on the twelfth day revealed signs of neuromuscular block consistent with the diagnosis of botulism. He remained in the hospital intensive care unit on a respirator until mid-October when he began to show a marked improvement. He was discharged from the hospital on November 4.

(Reported by Michael Cherington, M.D., neurologist, Stanley Ginsburg, M.D., neurologist, Charles Freed, M.D., neurosurgeon, Denver; and an EIS Officer.)

## Editorial Note

Although laboratory confirmation was not obtained, the

\*Inclusion of trade names does not imply endorsement by the Public Health Service or the U.S. Department of Health, Education, and Welfare.

**BOTULISM – Continued**

clinical and electromyographic findings in this case are consistent with a diagnosis of wound botulism. This is the tenth reported case of wound botulism known to CDC (1).

**Reference**

1. Merson MH, Dowell VR: The epidemiologic, clinical, and laboratory aspects of wound botulism. *N Engl J Med* 289:1005-1010, 1973

### INTERNATIONAL NOTES INFLUENZA – Canada

A 72-year-old retired physician and his wife returned to Hamilton, Ontario, Canada, from The International Congress of Allergology in Tokyo on October 28, 1973. The following day the physician became ill with malaise, anorexia, fever, and left-sided pleuritic chest pain. He was admitted to a local hospital where a chest X-ray showed a left lower lobe infiltrate. The patient improved without antibiotic therapy and was discharged on November 8, 1973.

On November 1, 1973, his wife became ill with fever, malaise, cough, and pharyngitis. A viral culture yielded an influenzavirus similar to A/England/42/72. Her husband had a diagnostic serologic rise to his wife's virus confirming that both he and his wife had influenza caused by a virus similar to A/England/42/72.

(Reported by W. J. Walker, M.D., private physician, Hamilton, Ontario; Bryce Larke, M.D., Virologist, St. Joseph's Hospital, Hamilton, Ontario; and The Epidemiology Bureau, Laboratory Center for Disease Control, Department of National Health and Welfare, Canada.)

**Erratum, Vol. 22, No. 44, p. 371**

In the article "Shiga Bacillus Dysentery – California," correct the first sentence, second paragraph of the Editorial Note to read: Unlike other forms of shigellosis, Shiga bacillus dysentery is frequently a serious intestinal infection that may be responsible for substantial morbidity and which may result in death if diagnosis and treatment are delayed or if the patient is treated inappropriately.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

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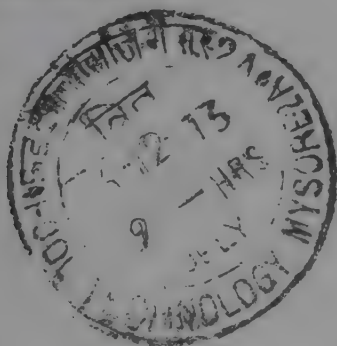
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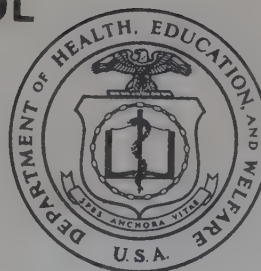
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# Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE  
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## EPIDEMIOLOGIC NOTES AND REPORTS SHELLFISH POISONING - Florida

On November 17, 1973, a 12-year-old boy experienced circumoral paresthesias, intermittent diplopia, dizziness, thirst, fatigue, nausea, and vomiting 30 minutes after eating 7 steamed clams, which he had gathered on a beach in Sarasota County, Florida. By the next morning, he was well except for mild dizziness and paresthesias of his extremities, which subsequently resolved.

His 10-year-old companion who ate 5 clams also became ill within 30 minutes with similar symptoms and later experienced dysphonia, ataxia, and weakness of his legs. Approximately 4 hours after eating the clams, he had a generalized convulsion and was admitted to a local hospital with persistent seizure activity. Following a respiratory arrest, he was unresponsive with dilated, reactive pupils and paralysis. Over the next 4 days he recovered completely.

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On November 18, shortly after consuming 3-4 dozen steamed clams gathered from a beach on Sarasota Bay, a man and woman developed paresthesias in their mouths (and later of their extremities), nausea, vomiting, and fatigue. The next morning they had persistent weakness and paresthesias of their extremities; in addition, the man developed abdominal pain and diarrhea, for which he required brief hospitalization. Both recovered.

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	48th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 48 WEEKS		
	December 1, 1973	December 2, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	60	91	91	4,425	3,985	4,120
Brucellosis	1	1	1	167	174	197
Chickenpox	1,318	2,681	---	153,502	127,217	---
Diphtheria	4	3	8	179	109	182
Encephalitis, primary:						
Arthropod-borne and unspecified	17	23	31	1,433	1,057	1,330
Encephalitis, post-infectious	4	5	4	259	252	313
Hepatitis, serum (Hepatitis B)	188	142	142	7,501	8,259	6,771
Hepatitis, infectious (Hepatitis A)	1,061	996	996	47,789	50,537	50,537
Malaria	2	4	54	230	960	2,738
Measles (rubeola)	232	536	536	25,760	29,705	29,705
Meningococcal infections, total	21	21	38	1,254	1,229	2,271
Civilian	21	19	28	1,228	1,182	2,003
Military	---	2	3	26	47	217
Mumps	990	1,461	1,902	63,823	65,703	93,191
Rubella (German measles)	115	364	364	27,304	23,630	46,991
Tetanus	1	3	3	83	110	126
Tuberculosis, new active	590	660	---	28,837	31,361	---
Tularemia	---	5	3	149	132	144
Typhoid fever	3	11	9	604	353	353
Typhus, tick-borne (Rky. Mt. spotted fever)	4	2	2	625	517	400
Venereal Diseases:						
Gonorrhea	16,714	16,759	---	762,539	698,977	---
Syphilis, primary and secondary	496	684	---	23,586	23,716	---
Rabies in animals	57	67	57	3,139	3,772	3,138

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	7
Botulism: Ky. 2	19	Paralytic:	5
Congenital rubella syndrome:	30	Psittacosis: Wis. 1	25
Leprosy: Ohio 1, Tex. 1	121	Rabies in man:	1
Leptospirosis: * Ohio 1, Tenn. 1	35	Trichinosis: Tex. 2	76
Plague:	2	Typhus, murine: Tex. 2	31

\* Delayed reports: Leptospirosis: Ariz. 1

## SHELLFISH POISONING — Continued

The areas where all these individuals gathered their clams had been officially closed to shellfish harvesting for several years because of water pollution; therefore no commercial distribution of the clams occurred.

Elevated numbers of the dinoflagellate *Gymnodinium breve* were first detected along a portion of the Florida Gulf Coast by the state surveillance system in late October, and a red tide alert was declared at that time. At the time of the outbreak, water obtained offshore from the beaches where the contaminated clams had been gathered contained high counts of *G. breve*. Clams from Sarasota Bay and Charlotte Harbor contained levels of *G. breve* toxin ranging from 30 to 100 mouse units per 100 mg of clam meat. Additional investigation revealed that a small fish kill had recently occurred near Charlotte Harbor, but no bird die-offs have been reported.

After the occurrence of the above cases, the Florida Gulf Coast from the northern border of Manatee County to the southern border of Collier County was closed to shellfish harvesting, and the public was advised through the media to refrain from consuming shellfish obtained from the area. No additional systemic illness has been reported, but residents of many coastal areas in Sarasota County have experienced symptoms of conjunctival and upper respiratory tract irritation frequently associated with *G. breve* red tides.

(Reported by Kenneth Gordon, M.D., Marion Erlandson, M.D., F. Edwards Rushton, M.D., private physicians, Sarasota; George N. Harrell, M.D., private physician, Palmetto; John F.

McGarry, M.D., County Health Officer, Sarasota County; S.T. Simpson, M.D., County Health Officer, Manatee County; Vernon Keys, Administrator, Sea Resources Section, Bureau of Sanitary Engineering, E. Charlton Prather, M.D., Chief, Bureau of Preventable Diseases, Florida Division of Health; and an EIS Officer.)

## Editorial Note

This is the first outbreak of red tide-related illness reported to CDC this year.

*Gymnodinium breve* is the dinoflagellate responsible for red tides along the Florida Coast. *Gonyaulax tamarensis* causes red tides along the northeastern coast of the United States while *Gonyaulax catenella* is responsible for most red tides along the Pacific Coast. Human illness is caused by the consumption of shellfish which have ingested the toxic dinoflagellate.

With the exception of the convulsion, the symptoms and signs in the 4 patients are typical of red tide-associated shellfish poisoning. Symptoms were more severe than usually seen with exposure to *G. breve* toxin, but less severe than those which often follow exposure to *Gonyaulax sp.* toxin. Of interest is the occurrence of symptoms of conjunctival and upper respiratory tract irritation due to aerosolization of toxin, as described in an outbreak in Palm Beach County, Florida, in 1972 (1).

## Reference

1. Music SI, Howell JT, Brumbach CL: Red tide: Its public health implications. J Florida Med Assoc 60:27-29, 1973

## RUBELLA OUTBREAK IN A COLLEGE — New York

Between April 2 and 20, 1973, an outbreak of rubella occurred at the Orange County Community College, Middletown, New York. A total of 34 cases were reported (12 in males, 22 in females) among the college's 1,649 students. Attack rates were 13.5 per 1,000 for males and 28.9 per 1,000 for females; the overall average attack rate was 20.6. The average age of the ill students was 21.3 years. Four cases were reported in the first week, followed by 10 and 20 cases in the second and third weeks, respectively. By the end of the third week, with the advent of the Easter vacation, the outbreak had ceased. All 34 patients were interviewed by Orange County health officials and gave no past history of rubella or rubella vaccination. A follow-up questionnaire was filled out by 18 students.

The most frequent complaints were rash (18), arthralgia (10), fever (8), excessive fatigue (6), conjunctivitis (5), and lymphadenitis (4). Sixteen of 18 students reported the duration of their rash; 11 of the 16 had rash for 3 days (range 2-5 days).

The diagnosis of rubella in 2 students was confirmed by serologic tests.

(Reported by Reuben Tizes, M.D., Commissioner of Health, Shirley Van Zetta, Director of Public Health Nursing, Joseph

Beaver, Public Health Advisor, Orange County Department of Health; Margery G. Bracco, R.N., Health Services Nurse, Orange County Community College, Middletown, New York; Rudolph Deibel, M.D., Division of Laboratories and Research, Alan R. Hinman, M.D., Assistant Commissioner, Division of Epidemiology and Preventive Health Services, New York State Department of Health.)

## Editorial Note

With widespread immunization programs aimed at pre-school and school-age children, the proportion of reported cases of rubella in high school and college-age individuals has increased. Rubella epidemics have occurred at a number of college campuses this year (MMWR, Vol. 22, No. 13). In most of these outbreaks, the illness has been confined to the campus and has not involved children in the surrounding community. The risk of exposure and infection of susceptible pregnant women appears to be small during these outbreaks. Serologic surveys indicate that 15-30% of adolescents and young adults are susceptible to rubella (1); however, this figure may be much higher in isolated populations.

## Reference

1. Witte JJ, et al: Epidemiology of rubella. Am J Dis Child 118:107, 1969

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING DECEMBER 1, 1973 AND DECEMBER 2, 1972 (48th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
				1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES .....	60	1	1,318	4	179	17	23	4	188	1,061	996
NEW ENGLAND .....	6	1	226	-	3	1	1	-	3	69	72
Maine*	-	-	-	-	-	-	-	-	-	1	8
New Hampshire *	-	-	12	-	-	-	-	-	-	1	11
Vermont .....	-	-	7	-	-	-	-	-	-	16	1
Massachusetts	5	-	122	-	1	1	1	-	1	24	30
Rhode Island .....	-	-	40	-	2	-	-	-	-	10	5
Connecticut .....	1	1	45	-	-	-	-	-	2	17	17
MIDDLE ATLANTIC .....	7	-	45	-	-	6	4	-	42	142	159
Upstate New York .....	5	-	4	-	-	4	1	-	5	66	31
New York City .....	1	-	41	-	-	-	-	-	4	11	37
New Jersey *	-	-	NN	-	-	1	-	-	22	31	45
Pennsylvania .....	1	-	-	-	-	1	3	-	11	34	46
EAST NORTH CENTRAL .....	14	-	497	-	1	4	6	1	16	140	175
Ohio *	2	-	19	-	1	1	2	-	1	20	29
Indiana .....	2	-	50	-	-	-	-	-	1	21	22
Illinois .....	-	-	-	-	-	-	2	1	-	26	42
Michigan .....	4	-	192	-	-	3	2	-	8	65	75
Wisconsin .....	6	-	236	-	-	-	-	-	6	8	7
WEST NORTH CENTRAL .....	2	-	220	-	7	-	4	1	7	75	41
Minnesota .....	2	-	11	-	-	-	1	1	1	4	1
Iowa *	-	-	172	-	-	-	1	-	1	23	3
Missouri .....	-	-	17	-	-	-	2	-	3	22	27
North Dakota .....	-	-	9	-	-	-	-	-	-	2	-
South Dakota .....	-	-	1	-	7	-	-	-	-	10	2
Nebraska *	-	-	2	-	-	-	-	-	-	-	3
Kansas .....	-	-	8	-	-	-	-	-	2	14	5
SOUTH ATLANTIC .....	12	-	103	-	8	1	3	-	8	117	119
Delaware .....	-	-	2	-	-	-	1	-	-	-	1
Maryland .....	-	-	1	-	-	-	-	-	-	9	23
District of Columbia .....	-	-	6	-	-	-	1	-	1	-	2
Virginia .....	4	-	12	-	-	-	-	-	1	8	24
West Virginia .....	-	-	80	-	-	-	-	-	-	2	13
North Carolina .....	4	-	NN	-	-	-	-	-	1	45	17
South Carolina .....	1	-	2	-	-	-	-	-	2	8	4
Georgia .....	-	-	-	-	1	-	1	-	-	-	9
Florida .....	3	-	-	-	7	1	-	-	3	45	26
EAST SOUTH CENTRAL .....	2	-	14	4	5	4	2	-	9	65	67
Kentucky .....	-	-	10	-	-	-	-	-	1	19	16
Tennessee .....	-	-	NN	-	-	-	1	-	2	33	37
Alabama .....	-	-	1	4	5	-	-	-	4	2	11
Mississippi .....	2	-	3	-	-	4	1	-	2	11	3
WEST SOUTH CENTRAL .....	7	-	53	-	18	-	2	1	22	212	135
Arkansas *	1	-	-	-	-	-	1	-	1	6	8
Louisiana .....	4	-	NN	-	1	-	-	-	8	69	14
Oklahoma .....	-	-	6	-	-	-	1	-	1	19	15
Texas .....	2	-	47	-	17	-	-	1	12	118	98
MOUNTAIN .....	-	-	48	-	50	-	-	-	6	43	45
Montana .....	-	-	29	-	-	-	-	-	-	5	6
Idaho .....	-	-	-	-	-	-	-	-	-	10	9
Wyoming .....	-	-	-	-	-	-	-	-	-	-	-
Colorado .....	-	-	13	-	-	-	-	-	5	10	11
New Mexico .....	-	-	6	-	27	-	-	-	-	1	3
Arizona *	-	-	-	-	23	-	-	-	-	5	11
Utah .....	-	-	-	-	-	-	-	-	-	7	5
Nevada .....	-	-	-	-	-	-	-	-	1	5	-
PACIFIC .....	10	-	112	-	87	1	1	1	75	198	183
Washington .....	-	-	94	-	76	-	-	-	7	12	20
Oregon .....	-	-	2	-	4	-	-	-	12	37	22
California .....	10	-	-	-	5	1	1	1	53	130	136
Alaska .....	-	-	10	-	2	-	-	-	-	7	-
Hawaii .....	-	-	6	-	-	-	-	-	3	12	5
Guam *	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	-	7	-	-	-	-	-	-	7	7
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: N.H. 4, Ohio delete 1, Iowa 1, Neb. 3  
 Chickenpox: Me. 2, Guam 1  
 Encephalitis, primary: Ohio delete 1

Hepatitis B: N.J. delete 1, Ark. 1, Ariz. 2  
 Hepatitis A: Me. 5, Ohio delete 1, Iowa 2,  
 Ark. 3, Ariz. 3, Guam 4

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING DECEMBER 1, 1973 AND DECEMBER 2, 1972 (48th WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES . . . . .	2	230	232	25,760	29,705	21	1,254	1,229	990	63,823	115	27,303
NEW ENGLAND . . . . .	—	17	22	7,557	4,040	1	51	54	180	4,048	10	3,702
Maine * . . . . .	—	—	—	69	252	—	1	4	—	424	—	72
New Hampshire . . . . .	—	—	12	960	745	—	7	3	4	215	2	381
Vermont . . . . .	—	2	—	120	128	—	3	—	—	274	—	47
Massachusetts . . . . .	—	7	1	3,962	1,066	1	14	24	41	1,124	2	2,077
Rhode Island . . . . .	—	1	8	632	525	—	3	12	61	704	4	225
Connecticut . . . . .	—	7	1	1,814	1,324	—	23	11	74	1,307	2	900
MIDDLE ATLANTIC . . . . .	2	38	75	2,738	1,144	1	173	147	63	7,767	17	4,284
Upstate New York . . . . .	2	19	2	820	167	—	62	34	NN	NN	9	472
New York City . . . . .	—	3	7	937	412	—	36	43	17	4,697	6	491
New Jersey * . . . . .	—	5	59	583	499	—	41	28	26	1,609	1	3,016
Pennsylvania . . . . .	—	11	7	398	66	1	34	42	20	1,461	1	305
EAST NORTH CENTRAL . . . . .	—	31	47	8,919	11,888	2	172	189	279	16,289	37	6,341
Ohio . . . . .	—	5	14	308	287	—	74	74	45	2,955	—	704
Indiana . . . . .	—	3	6	689	1,328	1	6	14	48	1,576	14	996
Illinois . . . . .	—	17	4	2,130	4,343	1	28	39	34	2,687	2	1,042
Michigan . . . . .	—	6	18	4,488	2,242	—	48	54	91	4,575	15	1,942
Wisconsin . . . . .	—	—	5	1,304	3,688	—	16	8	61	4,496	6	1,657
WEST NORTH CENTRAL . . . . .	—	8	6	462	1,126	1	92	88	86	5,421	1	1,237
Minnesota . . . . .	—	2	2	24	23	—	12	24	1	98	1	222
Iowa . . . . .	—	1	2	281	800	—	22	6	52	3,395	—	206
Missouri . . . . .	—	1	2	55	170	—	34	26	11	759	—	273
North Dakota . . . . .	—	1	—	67	59	—	3	—	1	76	—	277
South Dakota . . . . .	—	—	—	2	12	1	5	2	—	20	—	23
Nebraska* . . . . .	—	1	—	6	23	—	7	10	1	180	—	141
Kansas . . . . .	—	2	—	27	39	—	9	20	20	893	—	95
SOUTH ATLANTIC . . . . .	—	36	14	1,307	2,296	4	211	269	67	7,314	17	2,292
Delaware . . . . .	—	—	—	10	54	1	2	1	—	280	—	15
Maryland . . . . .	—	7	1	14	15	2	29	39	2	681	—	11
District of Columbia . . . . .	—	2	—	8	2	—	4	11	6	151	—	3
Virginia . . . . .	—	8	1	426	72	—	43	60	6	748	2	633
West Virginia . . . . .	—	—	5	229	302	—	6	8	32	2,546	2	341
North Carolina . . . . .	—	7	—	4	38	—	42	33	NN	NN	—	202
South Carolina . . . . .	—	1	6	76	217	—	13	23	1	367	1	87
Georgia . . . . .	—	3	—	152	193	—	23	21	—	32	—	12
Florida . . . . .	—	8	1	388	1,403	1	49	73	20	2,509	12	988
EAST SOUTH CENTRAL . . . . .	—	14	—	631	1,076	2	117	96	98	5,277	4	1,443
Kentucky . . . . .	—	9	—	394	539	2	42	30	23	1,573	2	418
Tennessee . . . . .	—	—	—	165	194	—	44	31	70	2,510	2	593
Alabama . . . . .	—	5	—	13	154	—	18	20	—	717	—	205
Mississippi . . . . .	—	—	—	59	189	—	13	15	5	477	—	227
WEST SOUTH CENTRAL . . . . .	—	13	12	743	1,669	7	199	148	83	4,482	6	1,513
Arkansas* . . . . .	—	—	—	72	13	1	14	13	6	405	—	115
Louisiana . . . . .	—	2	—	87	105	4	49	46	—	93	—	99
Oklahoma . . . . .	—	2	6	66	10	—	32	11	10	472	2	182
Texas . . . . .	—	9	6	518	1,541	2	104	78	67	3,512	4	1,117
MOUNTAIN . . . . .	—	9	38	990	1,949	1	37	32	25	2,697	2	2,424
Montana . . . . .	—	1	37	260	18	1	9	6	7	276	2	517
Idaho . . . . .	—	1	—	256	153	—	4	8	—	120	—	45
Wyoming . . . . .	—	—	—	81	51	—	1	1	—	433	—	7
Colorado . . . . .	—	2	1	109	537	—	11	6	14	550	—	1,556
New Mexico . . . . .	—	2	—	133	132	—	3	3	4	1,012	—	209
Arizona * . . . . .	—	2	—	21	898	—	5	1	—	140	—	6
Utah . . . . .	—	1	—	129	159	—	2	6	—	157	—	80
Nevada . . . . .	—	—	—	1	1	—	2	1	—	9	—	4
PACIFIC . . . . .	—	64	18	2,413	4,517	2	202	206	109	10,528	21	4,068
Washington . . . . .	—	4	15	1,080	993	—	21	19	12	1,770	2	737
Oregon . . . . .	—	4	—	461	166	1	17	14	24	1,947	6	819
California . . . . .	—	53	3	787	3,247	1	156	161	53	5,659	13	2,467
Alaska . . . . .	—	2	—	65	13	—	8	9	20	876	—	19
Hawaii . . . . .	—	1	—	20	98	—	—	3	—	276	—	26
Guam* . . . . .	—	—	—	52	16	—	—	13	—	31	—	14
Puerto Rico . . . . .	—	—	14	1,982	980	—	8	4	7	868	—	38
Virgin Islands . . . . .	—	—	—	7	3	—	—	2	—	32	—	2

\*Delayed reports: Measles: N.J. 24, Ariz. delete 1  
Meningococcal infections: Neb. delete 3, Ariz. delete 1

Mumps: Me. 9, Guam 3  
Rubella: Ark. 3, Ariz. delete 13

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING DECEMBER 1, 1973 AND DECEMBER 2, 1972 (48th WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES .....	83	590	28,837	149	3	604	4	625	16,714	496	57	3,139
NEW ENGLAND .....	2	13	1,073	—	—	17	—	3	282	3	—	114
Maine .....	—	3	102	—	—	—	—	—	20	—	—	61
New Hampshire .....	—	1	53	—	—	—	—	—	24	—	—	37
Vermont .....	—	—	29	—	—	—	—	—	13	—	—	3
Massachusetts .....	—	5	564	—	—	14	—	2	—	1	—	6
Rhode Island .....	1	1	90	—	—	—	—	—	53	—	—	1
Connecticut .....	1	3	235	—	—	3	—	1	172	2	—	6
MIDDLE ATLANTIC .....	7	84	5,599	—	—	65	2	37	2,555	138	1	52
Upstate New York .....	1	12	985	—	—	10	—	13	516	29	1	26
New York City .....	3	29	2,064	—	—	25	—	4	1,134	67	—	—
New Jersey .....	2	26	999	—	—	20	—	5	243	14	—	—
Pennsylvania .....	1	17	1,551	—	—	10	2	15	662	28	—	26
EAST NORTH CENTRAL .....	13	88	4,254	3	—	49	—	19	1,793	32	5	301
Ohio * .....	3	27	1,266	—	—	20	—	14	435	2	—	32
Indiana .....	4	19	545	—	—	1	—	—	331	3	—	53
Illinois .....	3	25	1,312	1	—	11	—	5	335	19	—	72
Michigan .....	1	17	1,054	2	—	13	—	—	531	8	1	11
Wisconsin .....	2	—	77	—	—	4	—	—	161	—	4	133
WEST NORTH CENTRAL .....	6	21	1,191	18	—	27	—	25	828	8	17	988
Minnesota .....	—	7	146	—	—	7	—	2	180	1	11	374
Iowa .....	—	4	119	—	—	—	—	7	—	—	3	200
Missouri .....	5	—	570	17	—	12	—	9	241	7	—	90
North Dakota .....	1	1	37	—	—	—	—	—	26	—	3	145
South Dakota .....	—	3	83	—	—	1	—	1	41	—	—	81
Nebraska * .....	—	2	76	—	—	1	—	2	190	—	—	6
Kansas .....	—	4	160	1	—	6	—	4	150	—	—	92
SOUTH ATLANTIC .....	18	118	5,734	18	—	252	—	307	4,474	179	7	282
Delaware .....	—	—	87	—	—	1	—	8	34	3	1	5
Maryland .....	—	13	634	6	—	9	—	14	362	12	—	15
District of Columbia .....	—	9	278	—	—	1	—	—	489	11	—	—
Virginia .....	3	8	767	5	—	3	—	61	543	24	2	88
West Virginia .....	1	11	284	—	—	11	—	4	37	1	1	23
North Carolina .....	—	19	911	2	—	5	—	141	400	28	1	14
South Carolina .....	2	5	462	—	—	6	—	32	425	30	—	6
Georgia .....	2	11	910	3	—	3	—	46	1,352	20	2	90
Florida .....	10	42	1,401	2	—	213	—	1	832	50	—	41
EAST SOUTH CENTRAL .....	8	81	2,643	10	1	44	—	112	1,326	20	6	393
Kentucky .....	1	35	602	1	—	11	—	—	137	5	3	206
Tennessee .....	5	7	813	7	1	16	—	52	545	12	3	144
Alabama .....	2	20	739	—	—	10	—	28	462	1	—	42
Mississippi .....	—	19	489	2	—	7	—	32	182	2	—	1
WEST SOUTH CENTRAL .....	15	77	3,018	91	—	26	2	106	2,369	44	14	553
Arkansas .....	1	13	362	62	—	5	—	20	511	2	3	116
Louisiana .....	4	23	437	1	—	6	—	—	481	10	2	51
Oklahoma .....	4	5	255	21	—	2	1	75	285	6	3	154
Texas .....	6	36	1,964	7	—	13	1	11	1,092	26	6	232
MOUNTAIN .....	—	30	968	7	—	14	—	8	574	12	2	55
Montana .....	—	4	52	—	—	—	—	1	—	—	—	10
Idaho .....	—	—	32	—	—	1	—	2	53	—	—	—
Wyoming .....	—	1	28	2	—	1	—	1	7	1	—	—
Colorado .....	—	13	194	—	—	2	—	1	243	—	—	—
New Mexico .....	—	—	203	2	—	4	—	3	56	5	—	7
Arizona * .....	—	11	353	—	—	6	—	—	149	5	2	35
Utah .....	—	1	47	2	—	—	—	—	49	—	—	3
Nevada .....	—	—	59	1	—	—	—	—	17	1	—	—
PACIFIC .....	14	78	4,357	2	2	110	—	8	2,513	60	5	401
Washington .....	3	6	329	1	—	7	—	5	217	—	—	9
Oregon .....	—	10	233	—	—	2	—	2	343	—	—	8
California .....	11	57	3,435	1	2	96	—	1	1,846	59	5	376
Alaska .....	—	—	103	—	—	4	—	—	71	—	—	8
Hawaii .....	—	5	257	—	—	1	—	—	36	1	—	—
Guan* .....	—	—	36	—	—	—	—	—	—	—	—	—
Puerto Rico .....	9	13	471	—	—	11	—	—	89	15	1	53
Virgin Islands .....	—	—	2	—	—	—	—	—	10	1	—	—

\*Delayed reports: TB: Ohio delete 1  
Gonorrhea: Ariz. delete 61, Guam 8

Syphilis: Ariz. delete 2  
Rabies: Neb. 3

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING DECEMBER 1, 1973

Week No.  
48

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	782	480	29	40	SOUTH ATLANTIC	1,254	695	45	67
Boston, Mass.	230	126	13	9	Atlanta, Ga.	137	59	12	6
Bridgeport, Conn.	36	27	1	2	Baltimore, Md.	237	131	8	—
Cambridge, Mass.	32	18	2	5	Charlotte, N. C.	59	33	2	—
Fall River, Mass.	30	23	—	1	Jacksonville, Fla.	108	58	3	2
Hartford, Conn.	55	29	3	1	Miami, Fla.	120	70	5	11
Lowell, Mass.	39	23	—	4	Norfolk, Va.	75	30	6	7
Lynn, Mass.	33	25	—	3	Richmond, Va.	106	49	3	9
New Bedford, Mass.	29	20	—	3	Savannah, Ga.	28	14	—	1
New Haven, Conn.	59	36	4	1	St. Petersburg, Fla.	118	95	1	3
Providence, R. I.	72	45	2	6	Tampa, Fla.	98	60	2	16
Somerville, Mass.	11	6	—	2	Washington, D. C.	96	51	2	6
Springfield, Mass.	52	34	1	2	Wilmington, Del.	72	45	1	3
Waterbury, Conn.	38	23	1	1	EAST SOUTH CENTRAL	833	501	26	40
Worcester, Mass.	66	45	2	4	Birmingham, Ala.	104	63	8	2
MIDDLE ATLANTIC	3,174	1,975	87	139	Chattanooga, Tenn.	63	37	1	4
Albany, N. Y.	60	35	2	2	Knoxville, Tenn.	39	23	—	1
Allentown, Pa.	25	19	—	—	Louisville, Ky.	163	98	6	16
Buffalo, N. Y.	169	113	7	15	Memphis, Tenn.	199	127	5	2
Camden, N. J.	47	29	—	3	Mobile, Ala.	85	46	4	5
Elizabeth, N. J.	36	15	—	1	Montgomery, Ala.	51	27	—	2
Erie, Pa.	46	24	—	6	Nashville, Tenn.	129	80	2	8
Jersey City, N. J.	76	44	5	4	WEST SOUTH CENTRAL	1,520	817	74	52
Newark, N. J.	86	41	4	6	Austin, Tex.	56	40	—	3
New York City, N. Y. †	1,413	920	30	64	Baton Rouge, La.	61	27	3	5
Paterson, N. J.	43	22	1	2	Corpus Christi, Tex.	23	18	1	—
Philadelphia, Pa.	497	289	16	5	Dallas, Tex.	190	90	9	2
Pittsburgh, Pa.	187	102	8	8	El Paso, Tex.	64	38	7	5
Reading, Pa.	36	25	—	4	Fort Worth, Tex.	87	46	5	5
Rochester, N. Y.	152	104	7	5	Houston, Tex.	329	155	14	8
Schenectady, N. Y.	31	20	—	1	Little Rock, Ark.	85	47	4	5
Scranton, Pa.	45	25	—	2	New Orleans, La.	183	100	10	4
Syracuse, N. Y.	107	74	5	2	Oklahoma City, Okla. *	106	61	5	2
Trenton, N. J.	57	34	2	3	San Antonio, Tex.	184	101	13	6
Utica, N. Y.	30	21	—	4	Shreveport, La.	69	40	1	4
Yonkers, N. Y.	31	19	—	2	Tulsa, Okla.	83	54	2	3
EAST NORTH CENTRAL	2,913	1,757	110	92	MOUNTAIN	564	334	25	21
Akron, Ohio	85	51	2	—	Albuquerque, N. Mex.	47	23	1	3
Canton, Ohio	64	39	2	6	Colorado Springs, Colo.	30	24	1	2
Chicago, Ill.	695	410	19	11	Denver, Colo.	124	72	—	2
Cincinnati, Ohio	239	138	21	8	Las Vegas, Nev.	27	13	1	3
Cleveland, Ohio	208	108	9	9	Ogden, Utah	16	10	—	1
Columbus, Ohio	131	87	4	1	Phoenix, Ariz.	137	80	10	2
Dayton, Ohio	147	102	3	1	Pueblo, Colo.	29	14	1	1
Detroit, Mich.	410	217	10	10	Salt Lake City, Utah	65	39	6	—
Evansville, Ind.	52	35	2	6	Tucson, Ariz.	89	59	5	7
Fort Wayne, Ind.	47	31	—	2	PACIFIC	1,823	1,121	55	41
Gary, Ind.	30	7	4	3	Berkeley, Calif.	28	21	—	2
Grand Rapids, Mich.	64	40	3	8	Fresno, Calif.	62	37	6	—
Indianapolis, Ind.	176	110	8	3	Glendale, Calif.	26	21	—	—
Madison, Wis.	38	20	1	5	Honolulu, Hawaii	59	37	2	1
Milwaukee, Wis.	172	130	1	6	Long Beach, Calif.	100	67	—	—
Peoria, Ill.	59	29	10	—	Los Angeles, Calif.	563	349	6	6
Rockford, Ill.	52	35	2	4	Oakland, Calif.	103	63	5	1
South Bend, Ind.	53	33	2	3	Pasadena, Calif.	36	27	1	1
Toledo, Ohio	120	97	3	3	Portland, Oreg.	112	70	5	1
Youngstown, Ohio	71	38	4	3	Sacramento, Calif.	61	35	—	2
WEST NORTH CENTRAL	958	578	33	35	San Diego, Calif.	148	90	6	4
Des Moines, Iowa	64	41	2	3	San Francisco, Calif.	177	92	8	7
Duluth, Minn.	23	14	—	1	San Jose, Calif.	66	36	—	—
Kansas City, Kans.	58	31	3	3	Seattle, Wash.	164	98	11	6
Kansas City, Mo.	153	100	3	3	Spokane, Wash.	73	46	4	8
Lincoln, Nebr.	34	25	2	1	Tacoma, Wash.	45	32	1	2
Minneapolis, Minn.	126	78	7	3	Total	13,821	8,258	484	527
Omaha, Nebr.	99	75	2	—	Expected Number	12,980	7,541	546	470
St. Louis, Mo.	220	95	9	12	Cumulative Total (includes reported corrections for previous weeks)	613,506	360,876	23,028	24,124
St. Paul, Minn.	99	65	3	3					
Wichita, Kans.	82	54	2	6					

†Delayed report for Week ending November 24, 1973

\*Estimate based on average percent of divisional total

CURRENT TRENDS  
PRIMARY AND SECONDARY SYPHILIS — United States, October 1973

In October 1973, reported cases of infectious syphilis increased by 5.2% over the number reported in October 1972. This increase is not thought to represent a significant departure from the general slowing of syphilis increase which has been occurring since April 1973. Syphilis cases have increased by less than 1% in the 7-month period, April-October 1973, compared with the same period in 1972.

Twenty-six of a total of 54 reporting areas recorded a greater number of cases in October 1973 than in October 1972.

Of these, 10 have shown a generally downward trend for the previous 6-month period, and 16 have shown a gradual upward trend. The areas with consistent increases represent clear challenges to the success of the current syphilis control efforts, and several of these have already initiated intensified (so-called "syphilis blitz") programs.

(Reported by the Venereal Disease Branch, Bureau of State Services, CDC.)

SUMMARY OF REPORTED CASES OF INFECTIOUS SYPHILIS

CASES OF PRIMARY AND SECONDARY SYPHILIS: By Reporting Area — October 1973 and October 1972 — Provisional

Reporting Area	October		Cumulative		Reporting Area	October		Cumulative	
	1973	1972	1973	1972		1973	1972	1973	1972
NEW ENGLAND .....	119	84	939	721	EAST SOUTH CENTRAL .....	127	126	1,133	1,238
Maine .....	1	2	22	23	Kentucky .....	50	32	315	295
New Hampshire .....	1	2	8	8	Tennessee .....	33	32	373	418
Vermont .....	4	2	20	14	Alabama .....	23	26	160	187
Massachusetts .....	87	61	652	421	Mississippi .....	21	36	285	338
Rhode Island .....	—	—	18	31	WEST SOUTH CENTRAL .....	194	245	2,250	2,482
Connecticut .....	26	17	219	224	Arkansas .....	9	9	115	159
MIDDLE ATLANTIC .....	516	541	4,761	4,925	Louisiana .....	66	64	692	748
Upstate New York .....	52	42	352	358	Oklahoma .....	9	18	143	89
New York City .....	288	361	2,900	3,390	Texas .....	110	154	1,300	1,486
Pa. (Excl. Phila.) .....	26	15	222	156	MOUNTAIN .....	45	48	473	429
Philadelphia .....	58	42	440	279	Montana .....	1	—	3	7
New Jersey .....	92	81	847	742	Idaho .....	—	2	10	6
EAST NORTH CENTRAL .....	182	221	1,896	2,185	Wyoming .....	1	1	4	10
Ohio .....	20	24	232	266	Colorado .....	15	5	168	63
Indiana .....	24	26	244	212	New Mexico .....	7	10	62	89
Downstate Illinois .....	16	17	165	120	Arizona .....	19	16	154	165
Chicago .....	71	96	763	901	Utah .....	—	1	12	18
Michigan .....	47	53	427	639	Nevada .....	2	13	60	71
Wisconsin .....	4	5	65	47	PACIFIC .....	397	336	3,592	3,038
WEST NORTH CENTRAL .....	47	26	315	251	Washington .....	14	10	135	106
Minnesota .....	8	6	83	46	Oregon .....	5	3	39	36
Iowa .....	7	6	49	48	California .....	375	317	3,359	2,860
Missouri .....	25	7	143	98	Alaska .....	—	2	14	15
North Dakota .....	—	—	2	2	Hawaii .....	3	4	45	21
South Dakota .....	—	—	5	2	U.S. TOTAL .....	2,333	2,218	21,403	20,746
Nebraska .....	3	1	13	17	TERRITORIES .....	90	78	697	736
Kansas .....	4	6	20	38	Puerto Rico .....	85	68	667	661
SOUTH ATLANTIC .....	706	591	6,044	5,477	Virgin Islands .....	5	10	30	75
Delaware .....	5	2	77	49	Note: Cumulative Totals include revised and delayed reports through previous months.				
Maryland .....	93	71	733	793					
District of Columbia .....	52	84	651	712					
Virginia .....	90	65	671	457					
West Virginia .....	2	7	16	30					
North Carolina .....	82	47	549	453					
South Carolina .....	80	50	639	403					
Georgia .....	110	133	1,068	1,198					
Florida .....	192	132	1,640	1,382					

INTERNATIONAL NOTES  
INFLUENZA — New Zealand

In August and September, outbreaks of influenza occurred in Dunedin and Port Chalmers, New Zealand. The etiologic agents in these outbreaks were type A influenza viruses. Recent studies of these isolates have shown some antigenic drift in both the hemagglutinin and neuraminidase antigens away from those of A/England/42/72. However, studies performed on serum from persons who recently re-

ceived the current bivalent influenza vaccine have shown that the responses to these viruses were good, suggesting that vaccination should provide protection against these strains. (Reported by the World Health Organization: Weekly Epidemiological Record 48(41,48):396, 462, 1973; International Influenza Center for the Americas and Viral Diseases Branch, Bureau of Epidemiology.)

## EPIDEMIOLOGIC NOTES AND REPORTS

## DENGUE — Florida

On September 25, 1973, a 29-year-old man who lived in Quincy, Florida, and 2 friends landed in Port-au-Prince, Haiti. They traveled approximately 75 miles to a small mission in Sau Deaux, then returned to Port-au-Prince and left Haiti on October 1 for the United States. On October 8, the man began experiencing fever, chills, and myalgia, and 2 days later he had a diffuse rash and retro-ocular pain. These symptoms gradually abated.

On October 13, however, fever recurred, and the patient was hospitalized with the tentative diagnosis of dengue fever. Blood specimens obtained on October 15 and 27 showed hemagglutination-inhibition antibodies to dengue antigen at 1:80 and <1:640 dilutions, respectively. Although the patient had episodes of epistaxis while in the hospital, coagulation studies were not performed. There was no other evidence of hemorrhagic diathesis. The man was discharged from the hospital on October 17 and has remained well. His 2 friends did not become ill.

(Reported by T.W. Griffin, M.D., private physician, Quincy, Florida; E. Charlton Prather, M.D., Chief, Bureau of Pre-

ventable Diseases, Florida Division of Health; and an EIS Officer.)

## Editorial Note

This is the first case of dengue reported from Florida since 1969. The last case of indigenously acquired dengue was reported from the state in 1934; since then, all Florida cases have been acquired outside the United States.

## Errata

Vol. 22, No. 45, p. 379

In Figure 3, the labeling of the ordinate (cases per 1,000 population) should read "0,10,20,30,40,50,60" rather than "1,2,3 . . ."

Vol. 22, No. 47, p. 395

In the article "Viral Hepatitis in Young Women after Ear Piercing — Washington," in the second sentence, second paragraph of the Editorial Note, delete: "boiling for 20 minutes"

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to:

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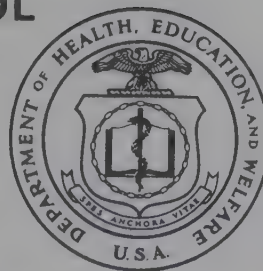
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EPIDEMIOLOGIC NOTES AND REPORTS  
HUMAN LEAD ABSORPTION — Texas

In December 1971, the City-County Health Department in El Paso, Texas, discovered that an ore smelter in El Paso was discharging large quantities of lead and other metallic wastes into the air. Between 1969 and 1971, this smelter had released 1,116 tons of lead, 560 tons of zinc, 12 tons of cadmium, and 1.2 tons of arsenic into the atmosphere through its stacks (Table 1).

Twenty-four hour air samples to determine the amounts of lead and other heavy metals suspended in the atmosphere were collected throughout 1971 and again between July 1972 and June 1973 by the local health department. Both series of tests showed that mean concentrations of metallic wastes in the air were highest immediately downwind of the smelter and that levels decreased logarithmically with distance from the smelter. The annual mean lead level immediately downwind of the smelter in 1971 was  $92 \mu\text{G}/\text{m}^3$  and in 1972-73

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was  $43 \mu\text{G}/\text{m}^3$ ; the U.S. Environmental Protection Agency's proposed safe upper limit for airborne lead content is  $2.0 \mu\text{G}/\text{m}^3$  of air (1). No metallic emissions were found near any of 15 other industrial establishments studied in El Paso.

Similarly, soil samples taken by the health department at selected sites within the urban area between June and

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	49th WEEK ENDING		MEDIAN* 1968-1972	CUMULATIVE, FIRST 49 WEEKS		
	December 8, 1973	December 9, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	61	86	80	4,494	4,071	4,194
Brucellosis	4	4	4	171	178	198
Chickenpox	2,146	3,773	— — —	155,711	130,990	— — —
Diphtheria	2	4	4	182	113	186
Encephalitis, primary:						
Arthropod-borne and unspecified	15	22	29	1,447	1,079	1,363
Encephalitis, post-infectious	3	9	6	262	261	316
Hepatitis, serum (Hepatitis B)	160	177	158	7,661	8,436	6,929
Hepatitis, infectious (Hepatitis A)	1,030	1,170	1,162	48,832	51,707	51,707
Malaria	1	7	31	231	797	2,762
Measles (rubeola)	255	565	536	26,013	30,270	30,270
Meningococcal infections, total	35	36	39	1,289	1,265	2,330
Civilian	35	35	39	1,263	1,217	2,054
Military	—	1	1	26	48	218
Mumps	1,642	1,522	2,258	65,492	67,225	95,691
Rubella (German measles)	173	260	380	27,479	23,890	47,371
Tetanus	2	3	3	85	113	132
Tuberculosis, new active	624	605	— — —	29,458	31,966	— — —
Tularemia	6	4	2	155	136	149
Typhoid fever	6	8	8	610	361	361
Typhus, tick-borne (Rky. Mt. spotted fever)	1	2	1	626	519	400
Venereal Diseases:						
Gonorrhea	17,680	15,981	— — —	780,505	714,958	— — —
Syphilis, primary and secondary	419	542	— — —	24,008	24,258	— — —
Rabies in animals	52	53	59	3,191	3,825	3,197

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	7
Botulism: Alaska 8	27	Paralytic:	5
Congenital rubella syndrome: Tex. 1	31	Psittacosis:	25
Leprosy: Calif. 1, Hawaii 3	125	Rabies in man:	1
Leptospirosis: Ohio 1	36	Trichinosis:	76
Plague:	2	Typhus, murine:	31

LEAD - Continued

Table 1  
Particulate Waste Stack Emissions (in Tons [t]), by Year  
El Paso Smelter, 1969-1971

Year	Total Particulates	Lead	Cadmium	Zinc	Arsenic
1969	1,443t	292t	3.3t	139t	0.3t
1970	2,274	511	4.9	264	0.6
1971	1,282	313	3.8	157	0.3
Total	4,999t	1,116t	12.0t	560t	1.2t

Source: El Paso City-County Health Department

December 1972 showed the highest concentrations of lead and other metals to be in surface soil from within 0.2 miles of the smelter (Figure 1). Samples of drinking water, milk, and food obtained from homes in El Paso between January and March 1972 by the health department were uniformly free of lead.

Preliminary testing programs to evaluate the effect of the environmental contamination on human blood lead levels were conducted in El Paso between January and March 1972 by the local health department, the smelting company, and CDC. These initial studies showed that 43% of persons in all age groups and 62% of children through age 10 years living within 1 mile of the smelter had blood lead levels  $\geq 40 \mu\text{G}\%$ , a level considered to be evidence of undue lead absorption (2). There was a lower prevalence among persons living at greater distances from the smelter. No cases of overt lead poisoning were noted.

In August 1972, a random survey of the entire population living within 4.1 miles of the smelter in south and west El Paso was conducted by the health department and CDC. The area was divided along census tract lines into 3 strata roughly concentric about the smelter and each with a radius of 1.0-1.5 miles. In the small, innermost stratum, all households were visited; in the 2 outer strata, approximately 2% of households were selected. Of 833 occupied households included in the survey, 672 (80.6%) were reached for the interview. A venous blood sample for lead analysis by atomic absorption spectrophotometry (AAS) was obtained from all persons up to age 20 years and from every other person above that age; samples of paint, soil, household dust, and pottery were also collected in each home for lead analysis by AAS. In all age groups, the percentage of blood lead levels  $\geq 40 \mu\text{G}\%$  was found to be highest in those persons living nearest the smelter (Figure 2), and the prevalence was highest in the youngest individuals; migration rates among these persons were low. In area I, 5 (8.5%) of 59 persons 1-19 years of age with blood lead levels  $\geq 40 \mu\text{G}\%$  had moved into the area in the 2 years preceding the survey. In areas II and III, the migration rate for persons 1-19 years of age with blood levels  $\geq 40 \mu\text{G}\%$  was 8.2% (4 of 49); 1 person in this group had moved from area I.

A total of 1,971 paint samples were collected for lead analysis. In area I, 9 (39.1%) of 23 children 1-4 years had exposure to at least 1 paint sample with a lead content of 1.0% or more; the comparable figures for areas II and III were 11 (33.3%) of 33 and 17 (34.0%) of 50 children, respectively. These three rates were virtually identical ( $p > 0.9$  by Chi-square).

Figure 1  
LEAD SURFACE SOIL LEVELS  
EL PASO, TEXAS, AND DONA ANA COUNTY, NEW MEXICO - 1972

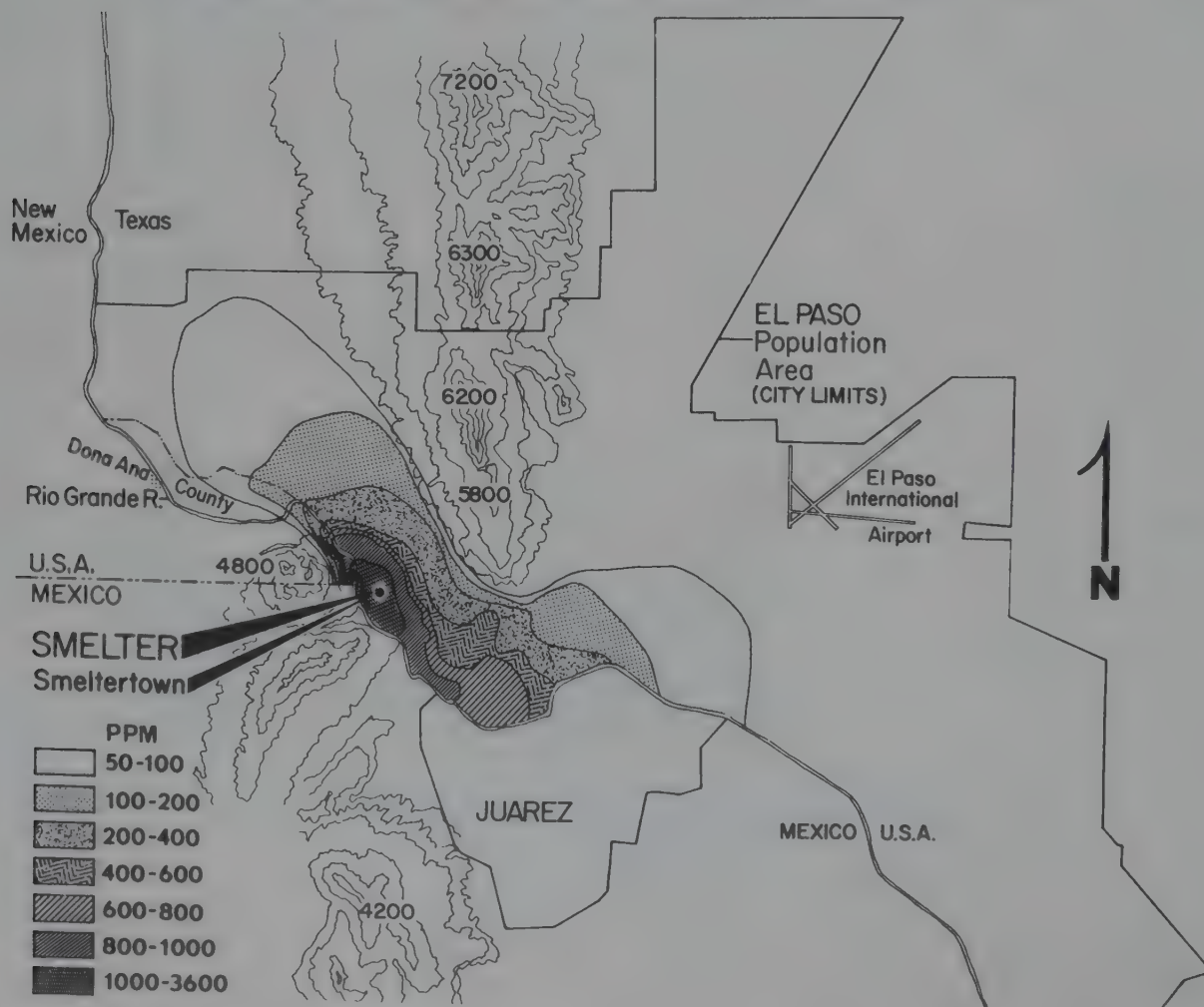
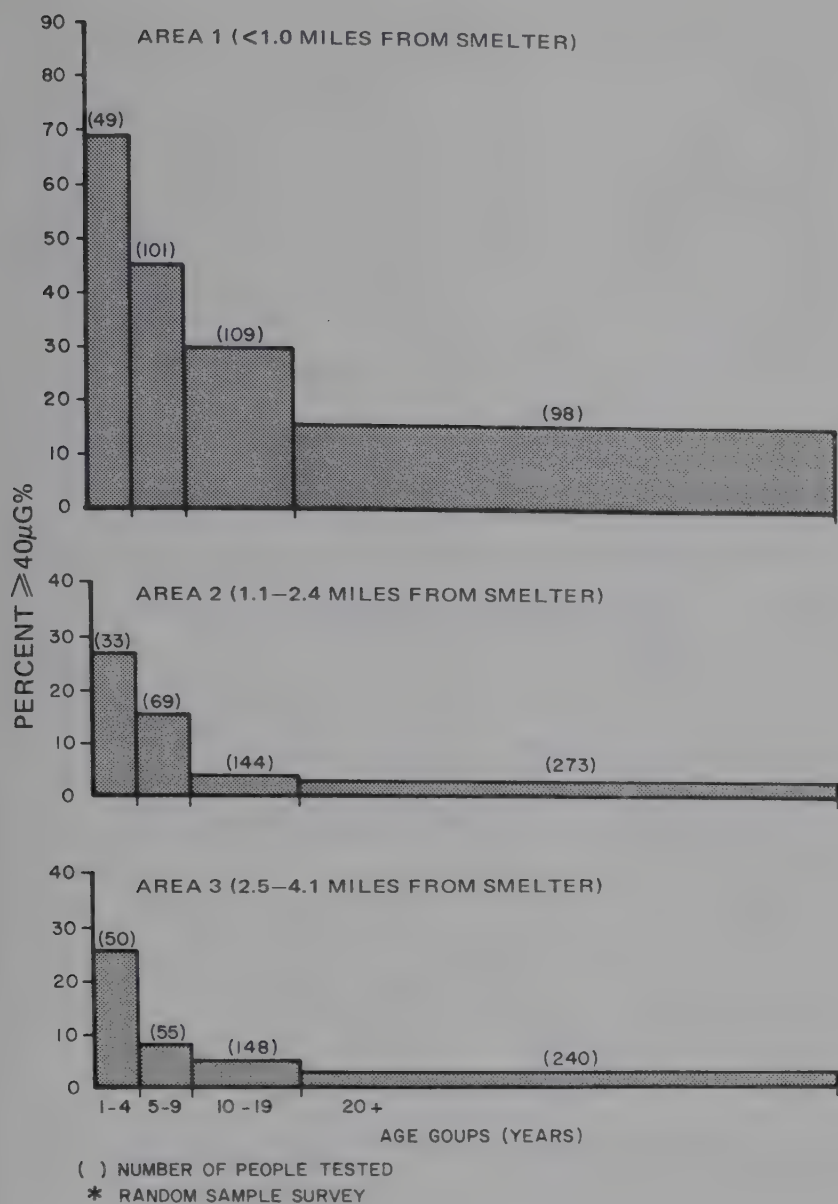


Figure 2  
PERCENT OF HUMAN BLOOD SAMPLES\* WITH  
LEAD LEVELS  $\geq 40 \mu\text{G}\%$ , EL PASO, TEXAS - 1972



Analysis of over 4,000 soil and household dust samples indicated that the mean content of lead in these specimens was significantly higher in area I than in areas II and III. Furthermore, persons 1-19 years with blood lead levels  $\geq 40 \mu\text{G}\%$  were found to have been exposed to soil and dust samples with significantly higher ( $p < 0.001$ ) mean lead contents (3,264 ppm for soil, 3,522 ppm for dust) than persons with blood lead levels below  $40 \mu\text{G}\%$  (means: 1,032 ppm and 1,279 ppm).

Pottery vessels were used for food storage or preparation in 37 homes visited. After 1% hydrochloric acid incubation for 6 hours, 2 of 6 vessels from sector I, 6 of 19 from sector II, and 4 of 12 from sector III had a lead content  $\geq 100 \mu\text{G}$  per ml in the eluate.

#### HEPATITIS-A IN HUMANS ASSOCIATED WITH NONHUMAN PRIMATES - Ohio

Between June 29 and July 22, 1973, 5 persons associated with an Ohio zoo—2 zookeepers, a zoologist, his wife, and his 3-year-old son—had onset of an illness diagnosed as hepatitis-A by their physicians. All 5 had jaundice and elevated transaminase enzymes, and all had negative radioimmunoassay tests for hepatitis-B antigen.

(Reported by Bernard F. Rosenblum, M.D., M.P.H., Director, El Paso City-County Health Department; James M. Shoults, Acting Environmental Engineer, El Paso City-County Health Department; J. Julian Chisolm, Jr., M.D., Chief of Pediatrics, Baltimore City Hospitals; Community and Environmental Management Activities, Bureau of State Services, CDC; the Field Services Branch, Bureau of Epidemiology, the Toxicology Section, Clinical Chemistry, Hematology, and Pathology Branch, Bureau of Laboratories, CDC; and a team of EIS Officers.)

#### Editorial Note

It may be estimated from this prevalence survey, using 1970 U.S. Census data, that at least 2,700 persons 1-19 years of age in El Paso had blood lead levels  $\geq 40 \mu\text{G}\%$  at the time of the survey (Table 2). These results indicate that the problem of undue lead absorption affects persons across all of south and west El Paso to a distance of at least 4 miles from the smelter. Lead emitted by the smelter and deposited in soil and dust would appear to be the major source of the lead absorbed by humans; the accumulation in the soil and dust of emitted lead is facilitated by several features of the local environment, particularly the aridity, the sheltering effect of the high mountains, and the frequent thermal inversions. Ingestion of lead-based paint may account for a small fraction of cases of undue absorption (at most 1/3) in the youngest children. Careful neurologic and psychologic studies of persons in El Paso with blood lead levels  $\geq 40 \mu\text{G}\%$  have been conducted and are being compared with results of similar studies in a matched group with lower lead levels. This study will make it possible to ascertain objectively whether any persons are suffering subtle but possibly permanent neurologic or psychologic sequelae from prolonged lead absorption.

Control measures undertaken to date include partial reduction of smelter emission and relocation to more distant public housing of approximately 500 persons who had lived closely adjacent to the smelter property.

#### References

1. Written Communication. U.S. Environmental Protection Agency, 1972
2. Medical Aspects of Childhood Lead Poisoning. *Pediatr* 48:464-468, 1971

Table 2  
Estimated Numbers of Persons 1-19 Years With Blood  
Lead Levels  $\geq 40 \mu\text{G}\%$ , by Distance from Smelter  
El Paso, Texas - August 1972

Distance from Smelter (Miles)	Sample Group		Population 1-19 Years*	
	No. Tested	% With Blood Lead $\geq 40 \mu\text{G}\%$	No. of Children	Projected No. with Blood Lead $\geq 40 \mu\text{G}\%$
0-1.0	259	43.2	723	312
1.1-2.4	246	11.0	12,316	1,355
2.5-4.1	253	9.5	11,486	1,091
Total	758	19.9	24,525	2,758

\*1970 Census

The 5 patients all gave a history of contact with a shipment of 3 siamangs that had arrived at the zoo on May 7, 1973. Each patient was interviewed to determine whether there were other potential sources of hepatitis. Except for the siamang contact, no animal, human, or food exposure was common to all 5 patients. The ill zookeeper and zoologist had had fre-

## HEPATITIS — Continued

quent contact with the siamangs while the animals were held in quarantine at the zoo during May and June 1973. However, the zoologist's wife and son had contact with the siamangs on only 1 occasion. On June 1, 1973, they visited the zoologist at his office when the siamangs were being groomed on a table outside their cage. The siamangs had diarrhea at the time, and the table was grossly contaminated. Although the wife and son recalled no direct contact with the animals, both said they had touched the table.

Six other persons at the zoo had close contact with the siamangs in May and June 1973; all denied jaundice. Two of them voluntarily underwent liver function tests in the second week in July. One had borderline abnormalities (bilirubin 1.4 mg%, SGOT 55 I.U.), and the other had normal results. Other persons who had come in contact with the siamangs were questioned about illness and were advised to receive gamma globulin.

In June the 3 siamangs became ill with chronic lethargy, anorexia, and diarrhea. No liver function tests were done; one of them died on June 2, 1973, but no autopsy was performed.

The 3 siamangs were part of a shipment of 5 that arrived from Singapore at an animal exchange in Michigan on May 5, 1973. Representatives of the animal exchange stated that no personnel had been ill with hepatitis in 1973. Employees routinely receive gamma globulin every 6 months. One siamang from the shipment was sent on May 8 to a New Mexico zoo; no illness occurred in the animal or its handlers. The remaining siamang died of an undiagnosed illness at the exchange on May 24.

(Reported by Stephen Goldberg, M.D., Fellow in Digestive Diseases, Alistair Connell, M.D., Director, Division of Diges-

tive Diseases, and Professor of Medicine, University of Cincinnati College of Medicine; Yvonne Mohlman, M.D., Director, Lead Surveillance Program, Cincinnati Health Department; John H. Ackerman, M.D., Deputy Director, Community Health, Ohio Department of Health; and an EIS Officer.)

## Editorial Note

Nonhuman primate-associated hepatitis has occurred in persons who have frequent exposure to young, recently imported primates (1, 2). Including those in this report, 198 cases of nonhuman primate-associated hepatitis in humans have been reported in the United States. A variety of nonhuman primate species have been associated with cases of hepatitis. Of 168 cases in which a single species was incriminated, 151 were associated with chimpanzees, 9 with woolly monkeys, 4 with gorillas, and 4 with celebes apes. It appears now that siamangs, close relatives of the gibbon, can be added to this list. No cases have been reported in any country other than the United States.

Recommended measures for preventing spread of disease from these primates to humans include 1) maintaining scrupulous habits of personal hygiene and using protective clothing when in contact with animals or their excreta, 2) limiting the number of persons who have contact with recently imported animals, and 3) administering immune serum globulin prophylaxis to persons with continued, frequent, or long-term exposure to recently imported young animals, especially chimpanzees.

## References

1. Center for Disease Control: Hepatitis Surveillance Report No. 34, September 1972
2. Center for Disease Control: Hepatitis Surveillance Report No. 36, September 1973

### SALMONELLA BLOCKLEY FOODBORNE DISEASE OUTBREAK — Illinois

From June 9 through June 12, 1973, an outbreak of salmonellosis occurred in Cook County among 9,000 persons attending 190 parties served by a single catering service. Hosts of 130 parties were interviewed; 19 (15%) reported illness in some of their guests (Table 3). Although the total number of persons ill was not determined, 6 persons were known to have been hospitalized. No fatalities were reported.

Detailed histories were obtained on 200 persons, of whom 163 (81.5%) reported illness. The illness was characterized by diarrhea (93.8%), abdominal pain (87.8%), fever (60.8%), vomiting (18.4%), and nausea (16.6%), with many

persons complaining of headache and dizziness. The mean incubation period was 18 hours, with a range of 6 to 48 hours. The duration of symptoms was 6 hours to 10 days with a mean of approximately 4 days. Eleven stool samples were obtained for culture and 8 yielded *Salmonella blockley*.

The catering service had supplied beef in gravy, chicken, potato salad, cole slaw, a relish tray, buns, and rolls for each party. Differential food-specific attack rates implicated the beef in gravy as the probable vehicle of infection (Table 4). Cultures of 5 samples of beef in gravy yielded *S. blockley*. In addition, *Clostridium perfringens* was isolated from 1 beef sample. No other food items were available for culture.

Investigation of the catering establishment revealed generally good sanitary conditions and no evidence of inadequate cooking temperatures. The caterer was well established and had not been involved in known prior outbreaks. No new personnel, new sources of supply, or new procedures had been employed. Environmental cultures were not taken, nor were cultures of raw materials. All 5 food handlers submitted fecal specimens for culture; 2 were found to be positive for *S. blockley*. None of the food handlers had experienced any recent illness, but all had eaten beef in gravy during the period that the outbreak had occurred.

Foods were received from several different suppliers. Raw beef was received every 3 days and baked until well

(Continued on page 413)

Table 3  
Illness Following Parties Catered by a Single Establishment  
Illinois, 1973

Date	Meals Served	Parties Served	Hosts Interviewed	Parties with Illness Following	
				No.	%
June 9	4,408	87	60	3	5
June 10	4,342	98	66	13	20
June 11	130	1	1	1	100
June 12	196	4	3	2	67
Totals	9,076	190	130	19	15

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING DECEMBER 8, 1973 AND DECEMBER 9, 1972 (49th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
	1973	1973	1973	1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES . . . . .	61	4	2,146	2	182	15	22	3	160	1,030	1,170
NEW ENGLAND . . . . .	5	—	372	—	3	1	3	—	3	91	81
Maine* . . . . .	—	—	10	—	—	—	—	—	—	2	17
New Hampshire * . . . . .	—	—	8	—	—	—	—	—	—	2	8
Vermont . . . . .	—	—	22	—	—	—	—	—	—	37	1
Massachusetts . . . . .	2	—	228	—	1	1	2	—	1	32	26
Rhode Island . . . . .	1	—	37	—	2	—	—	—	—	8	3
Connecticut . . . . .	2	—	67	—	—	—	1	—	2	10	26
MIDDLE ATLANTIC . . . . .	14	—	54	—	—	3	3	—	29	128	185
Upstate New York . . . . .	4	—	—	—	—	—	—	—	5	32	40
New York City . . . . .	2	—	44	—	—	—	—	—	5	16	27
New Jersey . . . . .	7	—	NN	—	—	1	1	—	13	36	47
Pennsylvania . . . . .	1	—	10	—	—	2	2	—	6	44	71
EAST NORTH CENTRAL . . . . .	8	—	746	1	2	4	6	—	22	112	185
Ohio * . . . . .	1	—	86	—	1	3	2	—	14	15	57
Indiana* . . . . .	2	—	53	—	—	—	—	—	—	9	12
Illinois . . . . .	—	—	—	1	1	1	1	—	—	11	32
Michigan . . . . .	5	—	180	—	—	—	3	—	7	70	78
Wisconsin . . . . .	—	—	427	—	—	—	—	—	1	7	6
WEST NORTH CENTRAL . . . . .	7	—	378	—	7	1	1	—	1	34	25
Minnesota . . . . .	4	—	37	—	—	—	—	—	1	5	6
Iowa . . . . .	—	—	209	—	—	—	1	—	—	—	3
Missouri . . . . .	3	—	2	—	—	1	—	—	—	10	8
North Dakota . . . . .	—	—	29	—	—	—	—	—	—	—	—
South Dakota . . . . .	—	—	1	—	7	—	—	—	—	8	5
Nebraska . . . . .	—	—	14	—	—	—	—	—	—	3	1
Kansas . . . . .	—	—	86	—	—	—	—	—	—	8	2
SOUTH ATLANTIC . . . . .	8	1	105	—	9	3	6	—	17	159	236
Delaware . . . . .	—	—	—	—	—	—	—	—	—	3	—
Maryland . . . . .	1	—	19	—	—	—	—	—	—	9	10
District of Columbia . . . . .	—	—	6	—	—	—	—	—	—	1	—
Virginia . . . . .	4	—	9	—	—	—	—	—	3	9	21
West Virginia . . . . .	—	—	67	—	—	—	—	—	—	11	11
North Carolina . . . . .	—	—	NN	—	—	—	—	—	—	21	42
South Carolina . . . . .	2	—	4	—	—	—	1	—	1	17	21
Georgia* . . . . .	—	1	—	—	2	—	4	—	—	12	21
Florida . . . . .	1	—	—	—	7	—	1	—	13	76	110
EAST SOUTH CENTRAL . . . . .	1	1	64	—	5	—	—	—	21	69	64
Kentucky . . . . .	—	—	50	—	—	—	—	—	9	13	16
Tennessee . . . . .	1	1	NN	—	—	—	—	—	11	48	37
Alabama . . . . .	—	—	13	—	5	—	—	—	1	6	5
Mississippi . . . . .	—	—	1	—	—	—	—	—	—	2	6
WEST SOUTH CENTRAL . . . . .	6	—	38	—	18	1	1	—	12	164	92
Arkansas . . . . .	—	—	—	—	—	1	—	—	—	9	7
Louisiana . . . . .	2	—	NN	—	1	—	—	—	2	17	9
Oklahoma . . . . .	2	—	3	—	—	—	—	—	—	14	14
Texas . . . . .	2	—	35	—	17	—	1	—	10	124	62
MOUNTAIN . . . . .	—	—	88	1	51	—	—	—	6	50	60
Montana . . . . .	—	—	32	—	—	—	—	—	—	11	2
Idaho . . . . .	—	—	—	—	—	—	—	—	—	10	16
Wyoming . . . . .	—	—	4	—	—	—	—	—	—	—	1
Colorado . . . . .	—	—	22	—	—	—	—	—	3	12	8
New Mexico . . . . .	—	—	29	—	27	—	—	—	—	5	15
Arizona . . . . .	—	—	—	1	24	—	—	—	2	6	14
Utah . . . . .	—	—	1	—	—	—	—	—	1	6	4
Nevada . . . . .	—	—	—	—	—	—	—	—	—	—	—
PACIFIC . . . . .	12	2	301	—	87	2	2	3	49	223	242
Washington . . . . .	—	—	272	—	76	—	—	—	4	36	44
Oregon . . . . .	—	—	1	—	4	—	—	1	3	14	35
California . . . . .	12	2	—	—	5	2	2	2	42	164	152
Alaska . . . . .	—	—	3	—	2	—	—	—	—	7	—
Hawaii . . . . .	—	—	25	—	—	—	—	—	—	2	11
Guam * . . . . .	—	—	—	—	—	—	—	—	—	—	1
Puerto Rico . . . . .	—	—	5	—	—	—	—	—	2	17	5
Virgin Islands . . . . .	—	—	—	—	—	—	—	—	—	—	—

\* Delayed Reports: Aseptic meningitis: N.H. 8  
 Chicken pox: Me. 13, N.H. 50, Guam 4  
 Diphtheria: Ga. 1  
 Encephalitis, primary: N.H. delete 1

Hepatitis B: Me. 1, Ohio delete 1  
 Hepatitis A: Me. 7, N.H. 4, Ohio delete 1, Ind. 2  
 Ga. 5, Guam 3

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING DECEMBER 8, 1973 AND DECEMBER 9, 1972 (49th WEEK) - Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	1	231	255	26,013	30,270	35	1,289	1,265	1,642	65,492	173	27,477
NEW ENGLAND .....	-	17	22	7,577	4,201	1	52	56	216	4,291	8	3,777
Maine * .....	-	-	-	70	253	-	1	4	6	452	-	7
New Hampshire* .....	-	-	9	970	768	-	7	3	8	228	-	38
Vermont .....	-	2	-	120	128	-	3	-	-	274	1	4
Massachusetts * .....	-	7	6	3,964	1,093	1	15	25	64	1,188	4	2,088
Rhode Island .....	-	1	7	639	526	-	3	12	46	750	2	22
Connecticut .....	-	7	-	1,814	1,433	-	23	12	92	1,399	1	90
MIDDLE ATLANTIC .....	-	38	51	2,789	1,150	7	180	156	138	7,905	12	4,299
Upstate New York .....	-	19	1	821	168	3	65	36	NN	NN	-	47
New York City .....	-	3	6	943	417	-	36	43	16	4,713	4	49
New Jersey .....	-	5	43	626	499	4	45	30	20	1,629	6	3,02
Pennsylvania .....	-	11	1	399	66	-	34	47	102	1,563	2	30
EAST NORTH CENTRAL .....	-	31	80	8,999	12,041	5	177	190	392	16,681	31	6,37
Ohio .....	-	5	5	313	295	-	74	74	85	3,040	1	70
Indiana .....	-	3	13	702	1,343	-	6	14	67	1,643	8	1,00
Illinois .....	-	17	28	2,158	4,374	-	28	40	64	2,751	4	1,04
Michigan .....	-	6	16	4,504	2,281	4	52	54	109	4,684	13	1,95
Wisconsin .....	-	-	18	1,322	3,748	1	17	8	67	4,563	5	1,66
WEST NORTH CENTRAL .....	-	8	1	463	1,287	-	92	89	219	5,640	3	1,24
Minnesota .....	-	2	-	24	23	-	12	25	5	103	2	22
Iowa .....	-	1	-	281	960	-	22	6	155	3,550	1	207
Missouri .....	-	1	-	55	170	-	34	26	12	771	-	273
North Dakota .....	-	1	-	67	60	-	3	-	-	76	-	277
South Dakota .....	-	-	1	3	12	-	5	2	-	20	-	23
Nebraska .....	-	1	-	6	23	-	7	10	2	182	-	141
Kansas .....	-	2	-	27	39	-	9	20	45	938	-	95
SOUTH ATLANTIC .....	-	36	8	1,316	2,309	6	217	276	115	7,429	30	2,322
Delaware .....	-	-	-	10	54	-	2	1	-	280	-	15
Maryland .....	-	7	-	14	15	1	30	39	4	685	-	11
District of Columbia .....	-	2	-	8	2	-	4	11	5	156	-	3
Virginia .....	-	8	3	429	76	2	45	61	18	766	3	636
West Virginia .....	-	-	1	230	302	-	6	8	46	2,592	-	341
North Carolina .....	-	7	-	4	38	1	43	34	NN	NN	-	202
South Carolina .....	-	1	1	77	217	-	13	25	5	372	1	88
Georgia * .....	-	3	-	153	195	-	23	22	-	32	-	12
Florida .....	-	8	3	391	1,410	2	51	75	37	2,546	26	1,014
EAST SOUTH CENTRAL .....	-	14	5	635	1,080	5	122	98	213	5,490	23	1,466
Kentucky .....	-	9	4	398	540	4	46	30	94	1,667	-	418
Tennessee .....	-	-	-	165	195	1	45	32	94	2,604	16	609
Alabama .....	-	5	1	14	154	-	18	20	18	735	2	207
Mississippi * .....	-	-	-	58	191	-	13	16	7	484	5	232
WEST SOUTH CENTRAL .....	-	13	6	749	1,698	4	203	156	88	4,570	5	1,518
Arkansas .....	-	-	2	74	13	-	14	13	1	406	-	115
Louisiana .....	-	2	2	89	109	1	50	48	23	116	1	100
Oklahoma .....	-	2	-	66	10	-	32	12	4	476	-	182
Texas .....	-	9	2	520	1,566	3	107	83	60	3,572	4	1,121
MOUNTAIN .....	-	9	34	1,024	1,961	-	37	32	34	2,731	16	2,440
Montana .....	-	1	32	292	18	-	9	6	3	279	1	518
Idaho .....	-	1	-	256	153	-	4	8	1	121	-	45
Wyoming .....	-	-	-	81	51	-	1	1	3	436	-	7
Colorado .....	-	2	-	109	538	-	11	6	23	573	11	1,567
New Mexico .....	-	2	2	135	134	-	3	3	4	1,016	3	212
Arizona .....	-	2	-	21	907	-	5	1	-	140	1	7
Utah .....	-	1	-	129	159	-	2	6	-	157	-	80
Nevada .....	-	-	-	1	1	-	2	1	-	9	-	4
PACIFIC .....	1	65	48	2,461	4,543	7	209	212	227	10,755	45	4,113
Washington .....	-	4	27	1,107	996	-	21	20	53	1,823	7	744
Oregon .....	-	4	-	461	175	-	17	14	54	2,001	2	821
California .....	1	54	21	808	3,261	7	163	166	80	5,739	36	2,503
Alaska .....	-	2	-	65	13	-	8	9	39	915	-	19
Hawaii .....	-	1	-	20	98	-	-	3	1	277	-	26
Guam * .....	-	-	-	52	16	-	-	13	-	33	-	14
Puerto Rico .....	-	-	14	1,996	1,010	3	11	4	11	879	-	38
Virgin Islands .....	-	-	-	7	3	-	-	2	-	32	-	2

\* Delayed Reports: Measles: Me.-1, N.H.-1, Mass. delete 4,  
Ga.-1, Miss. delete 1

Mumps: Me.-22, N.H.-5, Guam-2  
Rubella: N.H.-2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING DECEMBER 8, 1973 AND DECEMBER 9, 1972 (49th WEEK) - Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES .....	85	624	29,458	155	6	610	1	626	17,680	419	52	3,191
NEW ENGLAND .....	2	37	1,110	-	3	20	-	3	284	2	-	114
Maine *	-	3	105	-	-	-	-	-	37	-	-	61
New Hampshire .....	-	1	54	-	-	-	-	-	25	-	-	37
Vermont .....	-	1	30	-	-	-	-	-	-	-	-	3
Massachusetts .....	-	26	590	-	3	17	-	2	-	-	-	6
Rhode Island .....	1	-	90	-	-	-	-	-	28	-	-	1
Connecticut .....	1	6	241	-	-	3	-	1	194	2	-	6
MIDDLE ATLANTIC .....	7	85	5,684	-	1	66	1	38	2,741	80	1	53
Upstate New York .....	1	12	997	-	-	10	-	13	330	1	-	26
New York City .....	3	38	2,102	-	1	26	-	4	1,026	54	-	-
New Jersey .....	2	15	1,014	-	-	20	-	5	651	17	-	-
Pennsylvania .....	1	20	1,571	-	-	10	1	16	734	8	1	27
EAST NORTH CENTRAL .....	13	122	4,375	3	-	49	-	19	2,370	36	10	311
Ohio *	3	36	1,301	-	-	20	-	14	1,039	14	6	38
Indiana .....	4	14	559	-	-	1	-	-	196	4	-	53
Illinois .....	3	43	1,355	1	-	11	-	5	129	5	-	72
Michigan .....	1	29	1,083	2	-	13	-	-	701	11	-	11
Wisconsin .....	2	-	77	-	-	4	-	-	305	12	4	137
WEST NORTH CENTRAL .....	7	39	1,228	22	-	27	-	25	871	5	10	998
Minnesota .....	-	-	146	-	-	7	-	2	205	3	1	375
Iowa *	-	5	124	-	-	-	-	7	2	-	3	203
Missouri .....	6	27	597	21	-	12	-	9	282	2	-	90
North Dakota .....	1	-	37	-	-	-	-	-	14	-	3	148
South Dakota .....	-	2	85	-	-	1	-	1	35	-	-	81
Nebraska .....	-	3	79	-	-	1	-	2	66	-	1	7
Kansas*	-	2	160	1	-	6	-	4	267	-	2	94
SOUTH ATLANTIC .....	18	112	5,846	19	-	252	-	307	4,135	137	7	289
Delaware .....	-	5	92	-	-	1	-	8	72	2	-	5
Maryland .....	-	12	646	6	-	9	-	14	317	17	-	15
District of Columbia .....	-	6	284	-	-	1	-	-	357	10	-	-
Virginia .....	3	15	782	6	-	3	-	61	297	6	4	92
West Virginia .....	1	11	295	-	-	11	-	4	50	-	1	24
North Carolina .....	-	16	927	2	-	5	-	141	437	9	-	14
South Carolina .....	2	-	462	-	-	6	-	32	856	46	-	6
Georgia .....	2	22	932	3	-	3	-	46	803	22	1	91
Florida .....	10	25	1,426	2	-	213	-	1	946	25	1	42
EAST SOUTH CENTRAL .....	9	53	2,696	10	-	44	-	112	1,777	21	4	397
Kentucky .....	1	8	610	1	-	11	-	-	255	1	3	209
Tennessee .....	5	25	838	7	-	16	-	52	621	11	1	145
Alabama .....	3	13	752	-	-	10	-	28	452	7	-	42
Mississippi .....	-	7	496	2	-	7	-	32	449	2	-	1
WEST SOUTH CENTRAL .....	15	69	3,087	91	-	26	-	106	2,322	54	7	560
Arkansas .....	1	13	375	62	-	5	-	20	216	3	-	116
Louisiana .....	4	4	441	1	-	6	-	-	668	7	-	51
Oklahoma .....	4	10	265	21	-	2	-	75	186	3	3	157
Texas .....	6	42	2,006	7	-	13	-	11	1,252	41	4	236
MOUNTAIN .....	-	31	999	8	-	14	-	8	737	8	1	56
Montana .....	-	4	56	-	-	-	-	1	88	-	-	10
Idaho .....	-	-	32	1	-	1	-	2	57	-	-	-
Wyoming .....	-	-	28	2	-	1	-	1	15	1	-	-
Colorado .....	-	15	209	-	-	2	-	1	266	1	-	-
New Mexico .....	-	3	206	2	-	4	-	3	64	2	-	7
Arizona .....	-	9	362	-	-	6	-	-	175	4	1	36
Utah .....	-	-	47	2	-	-	-	-	52	-	-	3
Nevada .....	-	-	59	1	-	-	-	-	20	-	-	-
PACIFIC .....	14	76	4,433	2	2	112	-	8	2,443	76	12	413
Washington .....	3	10	339	1	-	7	-	5	206	8	-	9
Oregon .....	-	4	237	-	-	2	-	2	193	2	-	8
California .....	11	55	3,490	1	2	98	-	1	1,919	66	12	388
Alaska .....	-	-	103	-	-	4	-	-	74	-	-	8
Hawaii .....	-	7	264	-	-	1	-	-	51	-	-	-
Guam *	-	-	39	-	-	-	-	-	-	-	-	-
Puerto Rico .....	9	7	478	-	-	11	-	-	87	10	-	53
Virgin Islands .....	-	-	2	-	-	-	-	-	6	-	-	-

\* Delayed Reports: TB: Ohio delete 1, Kans. delete 2, Guam 3  
Gonorrhea: Iowa 286, Guam 7  
Syphilis: Me. 3

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING DECEMBER 8, 1973

Week No.

49

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	697	470	14	39	SOUTH ATLANTIC	1,454	755	113	54
Boston, Mass.	193	105	5	11	Atlanta, Ga.	167	84	6	3
Bridgeport, Conn.	38	29	—	2	Baltimore, Md.	288	166	4	8
Cambridge, Mass.	24	17	—	7	Charlotte, N. C.	51	22	2	—
Fall River, Mass.	28	20	—	2	Jacksonville, Fla.	93	46	7	1
Hartford, Conn.	63	41	2	2	Miami, Fla.	104	58	2	4
Lowell, Mass.	33	22	—	4	Norfolk, Va.	65	37	2	4
Lynn, Mass.	26	17	—	1	Richmond, Va.	91	47	12	7
New Bedford, Mass.	22	16	—	—	Savannah, Ga.	40	21	—	1
New Haven, Conn.	60	41	3	1	St. Petersburg, Fla.	106	84	2	10
Providence, R. I.	50	42	—	5	Tampa, Fla.	67	30	2	6
Somerville, Mass.	11	10	1	2	Washington, D. C.	332	135	71	7
Springfield, Mass.	46	33	1	1	Wilmington, Del.	50	25	3	3
Waterbury, Conn.	46	32	1	—	EAST SOUTH CENTRAL	731	391	33	25
Worcester, Mass.	57	45	1	1	Birmingham, Ala.	147	73	8	—
MIDDLE ATLANTIC	3,258	1,942	112	117	Chattanooga, Tenn.	61	35	2	5
Albany, N. Y.	55	31	3	4	Knoxville, Tenn.	49	27	—	—
Allentown, Pa.	27	18	1	1	Louisville, Ky.	123	67	4	10
Buffalo, N. Y.	134	85	4	5	Memphis, Tenn.	176	96	12	2
Camden, N. J.	45	24	1	2	Mobile, Ala.	45	22	1	1
Elizabeth, N. J.	28	18	1	—	Montgomery, Ala.	28	18	1	1
Erie, Pa.	39	26	1	4	Nashville, Tenn.	102	53	5	6
Jersey City, N. J.	53	34	—	1	WEST SOUTH CENTRAL	1,229	678	61	38
Newark, N. J.	70	30	9	3	Austin, Tex.	49	28	5	4
New York City, N. Y. †	1,591	947	56	58	Baton Rouge, La.	37	21	1	1
Paterson, N. J.	42	23	2	2	Corpus Christi, Tex.	43	29	1	—
Philadelphia, Pa.	597	350	21	8	Dallas, Tex.	176	95	11	6
Pittsburgh, Pa.	184	102	4	10	El Paso, Tex.	52	28	1	3
Reading, Pa.	33	26	—	2	Fort Worth, Tex.	66	42	3	3
Rochester, N. Y.	113	64	4	4	Houston, Tex.	306	147	21	9
Schenectady, N. Y.	21	12	1	1	Little Rock, Ark.	58	26	6	2
Scranton, Pa.	27	18	—	—	New Orleans, La.	156	84	5	4
Syracuse, N. Y.	88	51	2	1	San Antonio, Tex.	131	76	5	1
Trenton, N. J.	35	24	2	4	Shreveport, La.	59	40	—	3
Utica, N. Y.	28	23	—	3	Tulsa, Okla.	96	62	2	2
Yonkers, N. Y.	48	36	—	4	MOUNTAIN	532	305	31	28
EAST NORTH CENTRAL	2,458	1,462	99	71	Albuquerque, N. Mex.	58	30	2	12
Akron, Ohio	58	38	4	—	Colorado Springs, Colo.	22	12	2	2
Canton, Ohio	33	22	3	2	Denver, Colo.	124	69	16	3
Chicago, Ill.	622	330	38	21	Las Vegas, Nev.	19	6	—	—
Cincinnati, Ohio	162	97	7	3	Ogden, Utah	20	13	—	1
Cleveland, Ohio	207	114	7	4	Phoenix, Ariz.	132	78	5	2
Columbus, Ohio	129	84	2	1	Pueblo, Colo.	25	18	2	7
Dayton, Ohio	119	87	2	3	Salt Lake City, Utah	66	44	4	—
Detroit, Mich.	329	192	3	9	Tucson, Ariz.	66	35	—	1
Evansville, Ind.	50	32	4	1	PACIFIC	1,823	1,148	54	45
Fort Wayne, Ind.	52	36	2	8	Berkeley, Calif.	29	18	1	1
Gary, Ind.	17	7	1	1	Fresno, Calif.	55	35	3	—
Grand Rapids, Mich.	57	44	1	3	Glendale, Calif.	32	22	—	—
Indianapolis, Ind.	159	76	9	1	Honolulu, Hawaii *	58	33	4	1
Madison, Wis.	35	23	2	4	Long Beach, Calif.	120	72	3	1
Milwaukee, Wis.	118	81	—	2	Los Angeles, Calif.	590	361	20	16
Peoria, Ill.	51	37	6	—	Oakland, Calif.	81	51	3	—
Rockford, Ill.	41	22	3	3	Pasadena, Calif.	36	29	—	—
South Bend, Ind.	50	36	—	—	Portland, Oreg.	135	92	2	3
Toledo, Ohio	115	72	3	2	Sacramento, Calif.	66	38	5	2
Youngstown, Ohio	54	32	2	3	San Diego, Calif.	130	85	1	2
WEST NORTH CENTRAL	742	454	32	24	San Francisco, Calif.	180	99	5	5
Des Moines, Iowa	62	40	—	1	San Jose, Calif.	76	56	4	3
Duluth, Minn.	27	19	—	1	Seattle, Wash.	141	95	2	1
Kansas City, Kans.	41	20	2	3	Spokane, Wash.	54	36	—	5
Kansas City, Mo.	115	72	2	2	Tacoma, Wash.	40	26	1	5
Lincoln, Nebr.	30	20	2	1	Total	12,924	7,605	549	441
Minneapolis, Minn.	72	44	3	3	Expected Number	12,687	7,506	465	439
Omaha, Nebr.	79	39	8	3	Cumulative Total (includes reported corrections for previous weeks)	622,224	365,971	23,389	24,458
St. Louis, Mo.	198	118	11	3					
St. Paul, Minn.	58	45	2	—					
Wichita, Kans.	60	37	2	7					

† Delayed reports for week ending December, 1973

\* Estimate based on average percent of divisional total

## SALMONELLA — Continued

Table 4  
Food-Specific Attack Rates for Guests at Catered Parties  
Illinois, 1973

Food Item	No. Who Ate Food				No. Who Did Not Eat Food			
	Ill	Not Ill	Total	Attack Rate (%)	Ill	Not Ill	Total	Attack Rate (%)
Beef in gravy	158	19	177	89	5	18	23	22*
Chicken	124	33	157	79	40	3	43	93
Potato salad	112	21	133	84	51	16	67	76
Cole slaw	104	23	127	82	59	14	73	81
Relish tray	88	23	111	79	75	14	89	84
Buns and rolls	81	14	95	85	82	23	105	78

\* $\chi^2 = 57.2$ ,  $p < 0.000001$

done according to a recipe for "Italian style" beef in gravy. The beef was then sliced on a board reserved for that purpose. Gravy made from the same beef was prepared on the premises and stored in large plastic containers. Raw chicken was re-

ceived pre-cut and then deep fried. Meals were delivered in unrefrigerated trucks. Atmospheric temperatures on June 9-12 ranged from 63°F to 94°F.

The caterer voluntarily suspended service while new equipment was obtained and procedures reviewed.

*Salmonella blockley* had not been commonly reported from the Chicago area. A retrospective study of recent cases showed that on May 5 this serotype was isolated from a girl who had attended a party served by the caterer involved in this outbreak, but no attempt to identify the source of her infection had been made.

(Reported by John B. Hall, M.D., M.P.H., Director, Colette M. Rasmussen, M.D., M.P.H., Chief, Division of Preventive Medicine, Dominic Lupo, Registered Sanitarian, and Francis E. Lochner, Public Health Advisor, Cook County Department of Public Health; Louise Brown, Chief, Diagnostic Services, Public Health Laboratory, Emmett Shaughnessy, Environmental Health Inspector, Division of Food and Drugs, Carl W. Langkop, M.S.P.H., Executive Field Epidemiologist, and Byron J. Francis, M.D., State Epidemiologist, Illinois Department of Public Health.)

## MEASLES—Montana

Between July and November 26, 1973, 331 cases of measles occurred in Butte, Montana (Figure 3); 75% were in school-age children. All cases were clinically compatible with measles, the majority manifesting the typical picture of a 2-4 day prodrome of lethargy, fever, cough, coryza, and conjunctivitis followed by a maculopapular rash lasting at least 4 days. An estimated 35-40 children were hospitalized. There were 19 complicated cases, including 11 cases of pneumonia, 7 of otitis, and 1 of encephalitis but no deaths. One case was confirmed serologically.

Twenty-seven ill children had a history of previous measles vaccination which was substantiated by detailed questioning of the parents or by a written record in the parents' possession; 5 of these had received the vaccine before they were 1 year of age. Seventeen children had equivocal histories of vaccination, and 287 had no history of previous vaccination.

The index case was in a 9-year-old boy who had moved from Idaho to Montana with his family on June 30, 1973. His mother knew of no source for her son's illness, and the Idaho State Health Department received no reports of measles from the area of the state where the family had lived. The child became symptomatic on July 8, and over the next 6 weeks his 5 siblings also became ill. On approximately September 1, 1973, the first case outside the index family occurred in a 6-year-old boy living in the same 4-dwelling apartment house as the index case. The first hospitalized patient, who became ill on September 9, also lived in the apartment house. During the next 10-day period no cases occurred, but there was a rapid increase in cases thereafter, from 29 in the following 10-day period to more than 80 in each of the subsequent 3 10-day periods.

Cases were clustered in the northwest quadrant of the city. Three of the 4 schools with highest attack rates were located there, and all were close to the index case's apartment house.

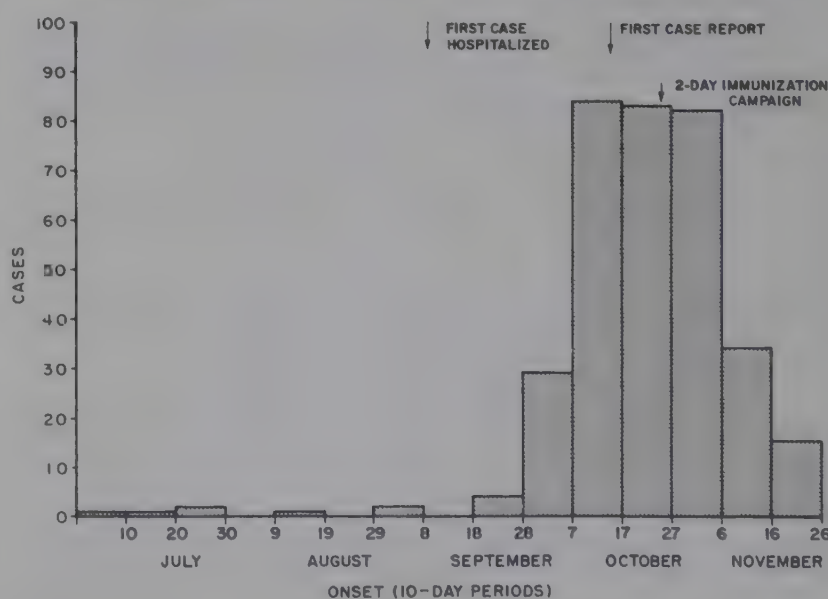
On October 16, the first case reports were received by the State Health Department and on October 25 and 26, a mass vaccination campaign was carried out among preschoolers and in all elementary schools in Butte. A total of

2,912 children were vaccinated, including 342 preschoolers. Two weeks later, the number of cases began to decline, with 34 and 15 occurring in the subsequent 2 10-day periods.

The last mass measles vaccination program in Butte was held in 1967, when 4,360 children, 1-5 years of age, received vaccine. Since then, private physicians and City-County Health Department clinics, held periodically, have provided vaccinations. In August 1973 a survey of 2-year-olds, with 65% responding, showed a measles immunity level of 74%. A survey of first-graders in 1972, with an undetermined response rate, showed a 55% immunity level.

(Reported by Fernand Duchesneau, M.D., Health Officer, Butte-Silver Bow City-County Health Departments; M. Richard Nelson, Field Representative, Don Pratt, Immunization Project Advisor, Martin D. Skinner, M.D., State Epidemiologist, Montana Department of Health and Environmental Sciences; and an EIS Officer.)

Figure 3  
MEASLES CASES BY 10-DAY PERIOD OF ONSET  
BUTTE, MONTANA — JULY 1, 1973–NOVEMBER 26, 1973



## MEASLES – Continued

## Editorial Note

The delay in reporting manifested in this epidemic is cause for concern. The initial case report was received by the State Health Department 3 1/2 months after the first case and 1 month after the first hospitalized case. Approximately

320 cases (97%) occurred 2 weeks or longer after the first hospitalized case and were, at least theoretically, preventable. The cost to the community and to individuals could have been reduced if an epidemic control program had been instituted prior to the bulk of cases occurring in late September and throughout October.

## CURRENT TRENDS

## INFLUENZA – United States, 1973

Influenza occurs each year in the United States, but the extent and the geographical distribution of the disease vary. This year influenza will most likely be caused by type A and type B viruses. The type A virus will be similar to the prototype A/England/42/72 (H3N2) which caused last year's outbreak, while the type B virus may be the previously prevalent strain similar to B/Massachusetts/1/71, one of the "intermediate" strains, or the new B/Hong Kong/5/72 strain. Most influenza cases will probably be caused by the A/England/42/72 virus rather than by the type B strains.

This year with the cooperation of the state epidemiologists, CDC is continuing the surveillance program begun in 1972. Each week data on emergency room admissions and school and industrial absenteeism are reported from more than 100 cities and provide the basis for a rapid, current assessment of disease activity throughout the country. To date, all surveillance indices have remained at the normal seasonal levels suggesting that little or no influenza is present. Furthermore, each week over 60 World Health Organization cooperating laboratories report influenza virus isolations and serologically confirmed cases of influenza. So far, 1 serologically confirmed case of influenza B has been reported from California; there have been no virologically confirmed cases.

In addition, mortality data are relayed each week from 121 cities throughout the United States (see Table 4, p. 412). Pneumonia-influenza deaths for the period September 1971 – November 1973 are plotted in Figure 4. On each graph the solid black line represents the expected number of deaths. The expected mortality is determined by using data from the prior 4-year period to predict the weekly mortality level for the current year (1, 2, 3). The method works well in general because the same seasonal pattern is observed each year, the same peaks are observed in years when there is not much influenza activity, and the same nadirs are observed almost every year. The only factor that must be taken into account is a general upward or downward trend in mortality that might occur over a period of years.

The expected mortality level is calculated by using weekly data for the previous 4-year period, omitting data for epidemic periods, and fitting the data to the following model by least squares:

$$\hat{y} = u + rt + A_1 \cos \frac{2\pi t}{52} + B_1 \sin \frac{2\pi t}{52} + A_2 \cos \frac{4\pi t}{52} + B_2 \sin \frac{4\pi t}{52}$$

The expected level is obtained by inserting the appropriate value of  $t$  in the equation where  $t$  is the number of the week from the beginning of the data which was fitted to the model. This procedure allows for a general mean, a slope, and annual and semi-annual cycles in the data, and omission of epidemic data prevents an inflation of the expected level during the influenza season. Except for resulting in a slightly smoother curve and yielding a standard error which forms the basis of the epidemic threshold and the scale on which the graphs are drawn, the procedure is almost equivalent to

averaging the deaths for corresponding weeks over the curve-fitting period and using the average as the expected for the next year.

The error mean square for each curve is obtained by summing the squares of the differences in observed and expected values over the curve-fitting period, omitting the data during epidemic periods, and dividing by the appropriate degrees of freedom. The square root of this is the standard error of the curve fit and is the basis for the epidemic threshold, defined as 1.65 standard errors above the expected. Experience has shown that the deviations between observed and expected values are normally distributed in most instances. Thus, the probability that one observation will exceed the threshold is .05, and the probability that two successive ones will exceed the threshold is approximately  $(.05)^2$ .

The reported numbers of deaths are shown as dots drawn by line segments. The solid line for each mortality category is the expected number of deaths. The dashed line is the epidemic threshold, the criterion for recognition of significant deviations in excess of the expected number. The charts are drawn to a scale that allows the distance between the expected and threshold levels to be constant for every curve. This device allows one to compare the influenza activity between regions by glancing at the regional chart. Although the vertical labels are different, comparison of the absolute distance on the chart between observed and threshold levels between regions shows whether the mortality is significantly higher in one region than another. This is accomplished by allowing 0.3 inches on the original full size chart to represent 1.65 standard errors of measurement for each graph that is drawn.

This year the "curve fit" is not ideal as most points fall above the expected level. However, past influenza epidemics have been heralded not by small increases above the expected level but by large increases above the epidemic threshold. The points above the expected but below the epidemic threshold should be interpreted as representing a normal, nonepidemic pattern.

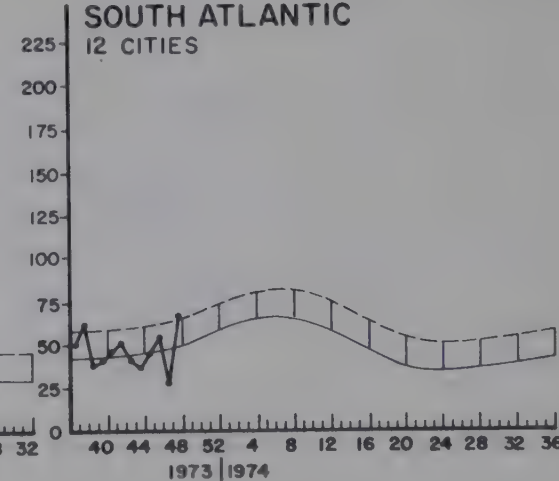
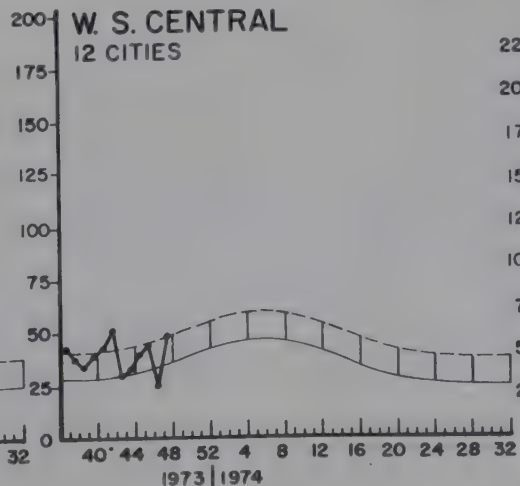
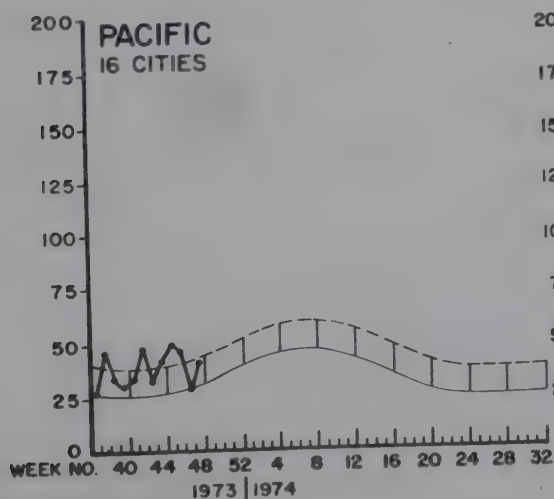
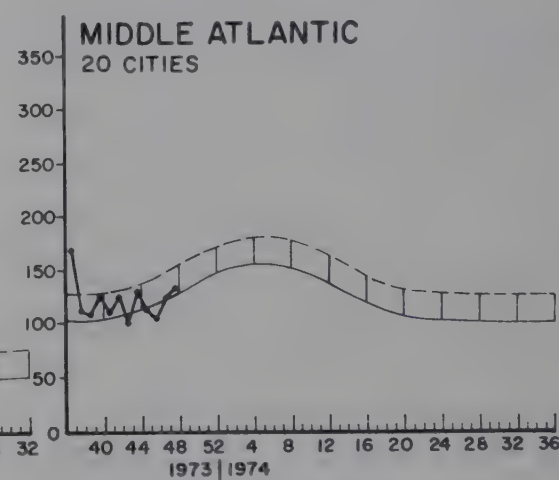
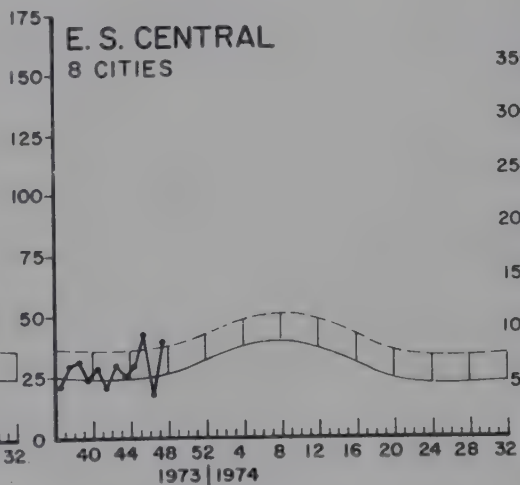
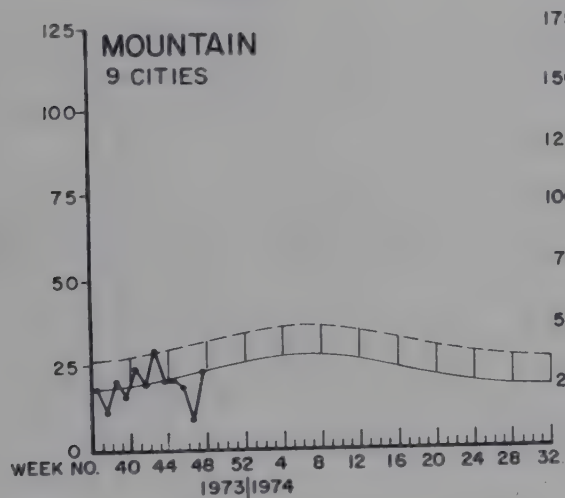
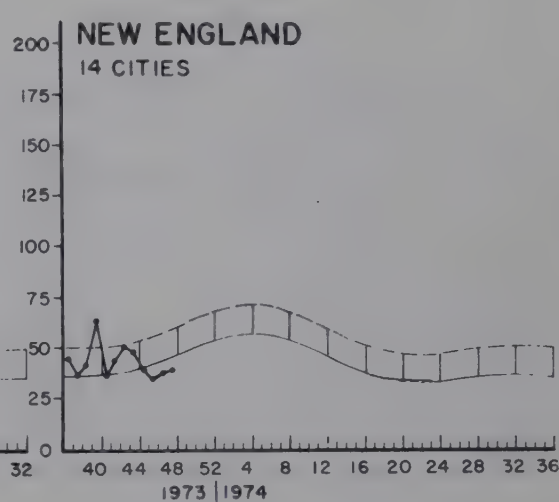
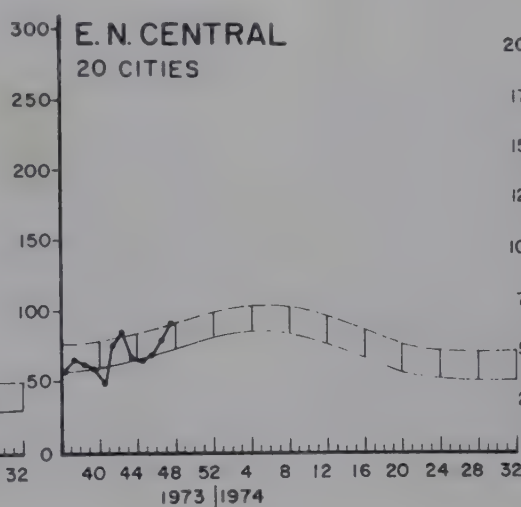
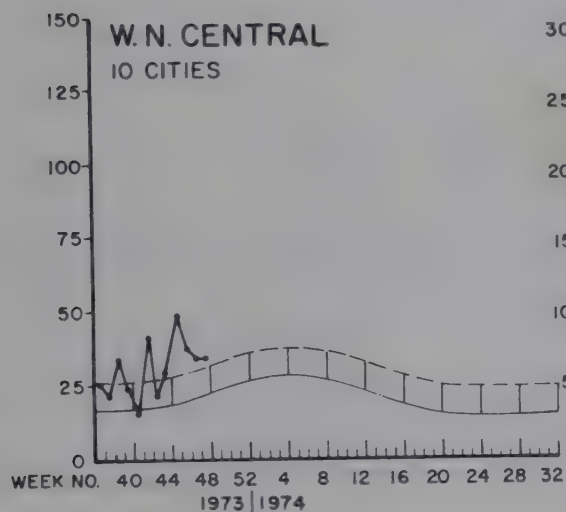
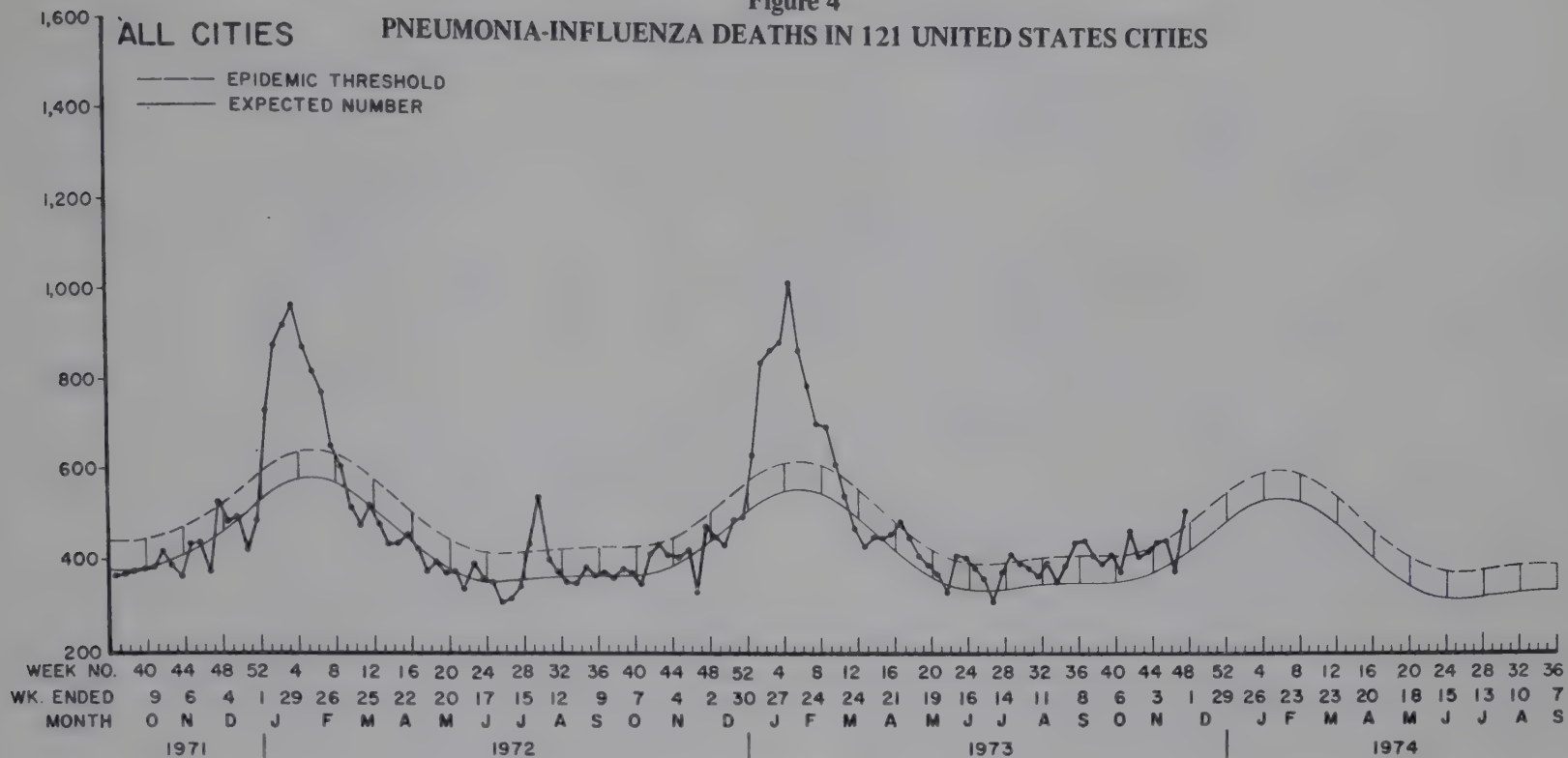
Although the observed number of deaths for week 48 exceeds the epidemic threshold, this represents delayed reporting over the Thanksgiving holiday. Therefore, at present, no influenza activity in the United States has been detected using both morbidity and mortality surveillance indices.

*(Reported by the Statistical Services Activity, and the Viral Diseases Branch, Bureau of Epidemiology, CDC.)*

## References

1. Collins SD, Lehmann J: Excess deaths from influenza and pneumonia and from important chronic diseases during epidemic periods, 1918-51, Public Health Monogr 10 (PHS Publication 213), US Government Printing Office, Washington, DC, 1953
2. Serfling RE: Methods for current statistical analysis of excess pneumonia-influenza deaths. Public Health Rep 78:494-506, 1963
3. Serfling RE: The current mortality chart. Morbidity and Mortality Weekly Rep 14(1):8-11, 1965

Figure 4



INTERNATIONAL NOTES  
QUARANTINE MEASURES

The following changes should be made in the "Supplement — United States Designated Yellow Fever Vaccination Centers," MMWR, Vol. 22, No. 32:

## LOUISIANA

Morgan City

Family Medical Center 70380

Change Clinic hours to:

Tues. and Fri., 1:30-2:30 p.m.

## VIRGINIA

Fairfax

Joseph Willard Health Center

Fairfax County Health Dept.

3750 Old Lee Highway

Fee charged

Clinic hours: Tues. and Wed., 9:30-10:30 a.m.

Telephone: 703-691-2651

(NEW CENTER)

## Errata

Vol. 22, No. 48, pp. 398, 404

In the articles "Shellfish Poisoning — Florida" and "Dengue — Florida," the following name was inadvertently omitted from the credits: Nathan J. Schneider, Ph.D., M.P.H., Chief, Bureau of Laboratories, Florida Division of Health.

Also, in the article "Dengue — Florida," paragraph 2, line 5, change the symbol from  $<$  to  $>1:640$  dilutions.

Vol. 22, Nos. 47, 48, pp. 395, 404

In the article "Viral Hepatitis in Young Women after Ear Piercing — Washington," Editorial Note, paragraph 2, line 7, delete: 98°C for 1 minute. This correction should also be substituted for the second erratum on page 404. Studies

by Krugman et al (1) in which aliquots of serum pools containing the MS-1 and MS-2 strains of hepatitis virus were heated at 98°C for 1 minute were performed on 1:10 dilutions of the serum. The heated MS-1 strain was neither infectious nor immunogenic in subsequent experiments. Heating the MS-2 strain reportedly modified infectivity but not antigenicity. Since no data are available as to the effects on infectivity and antigenicity of heating **undiluted** aliquots of the MS-1 and MS-2 strains at 98°C for 1 minute, one cannot assume that this treatment is an effective method of sterilization.

## Reference

1. Krugman S, Giles JP, Hammond J: Hepatitis virus: effect of heat on the infectivity and antigenicity of the MS-1 and MS-2 strains. J Infect Dis 122:432-436, 1970

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to: Center for Disease Control  
Attn: Editor  
Morbidity and Mortality Weekly Report  
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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
PUBLIC HEALTH SERVICE  
CENTER FOR DISEASE CONTROL  
ATLANTA, GEORGIA 30333

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# Morbidity and Mortality



Vol. 22, Nos. 51/52

WEEKLY  
REPORT

For  
Weeks Ending  
December 22 & 29, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE  
DATE OF RELEASE: JANUARY 4, 1973 — ATLANTA, GEORGIA 30333

## EPIDEMIOLOGIC NOTES AND REPORTS TYPE A BOTULISM — California

On November 22, 1973, 16 persons gathered for a Thanksgiving meal in San Jose, California. Early the next morning, 2 men, ages 41 and 36, developed dry sore throat, diplopia, dysphagia, and dysphonia. Both subsequently experienced generalized paralysis and respiratory failure requiring mechanical ventilatory assistance. They were treated with cathartics and enemas. The 41-year-old man received 7 vials of trivalent (ABE) botulinal antitoxin, the other received 4 vials.

Approximately 24 hours after the meal, a 39-year-old woman developed diplopia, and on November 25, a 64-year-old woman experienced vomiting, diarrhea, and ptosis. Both were initially purged and were given 4 vials of trivalent (ABE) botulinal antitoxin soon after symptoms developed.

The 41-year-old man subsequently died, the younger man is slowly recovering, and both women have been dis-

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charged from the hospital after showing marked improvement.

Epidemiologic investigation incriminated home-canned chili sauce. The 2 men had eaten approximately 10 teaspoonfuls of the sauce; the first woman to become ill had eaten 2 teaspoonfuls while the other had tasted a smaller portion. A 38-year-old woman who had also tasted a small amount of sauce was purged and was treated with 1 vial of trivalent

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	51st WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 51 WEEKS		
	December 22, 1973	December 23, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	35	70	58	4,607	4,214	4,294
Brucellosis	—	2	3	175	183	212
Chickenpox	2,268	3,196	—	159,996	137,439	—
Diphtheria	17	1	3	210	119	207
Encephalitis, primary:						
Arthropod-borne and unspecified	17	10	21	1,485	1,108	1,432
Encephalitis, post-infectious	3	8	6	267	274	323
Hepatitis, serum (Hepatitis B)	119	137	126	7,952	8,712	7,198
Hepatitis, infectious (Hepatitis A)	956	963	963	50,865	53,681	53,681
Malaria	1	5	27	236	806	2,835
Measles (rubeola)	230	380	509	26,484	31,059	31,059
Meningococcal infections, total	18	24	36	1,336	1,313	2,430
Civilian	18	24	33	1,310	1,265	2,127
Military	—	—	4	26	48	223
Mumps	1,234	1,510	2,213	68,043	70,245	100,646
Rubella (German measles)	191	771	437	27,827	24,924	48,165
Tetanus	1	2	2	87	117	135
Tuberculosis, new active	520	544	—	30,570	33,129	—
Tularemia	—	4	1	157	144	162
Typhoid fever	4	4	6	619	375	375
Typhus, tick-borne (Rky. Mt. spotted fever)	8	1	1	635	521	403
Venereal Diseases:						
Gonorrhea	13,471	14,112	—	810,705	744,296	—
Syphilis, primary and secondary	421	511	—	24,850	25,271	—
Rabies in animals	32	43	55	3,255	3,910	3,312

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	7
Botulism:	32	Paralytic:	5
Congenital rubella syndrome: Ariz. 1	38	Psittacosis:	25
Leprosy: Calif. 1	132	Rabies in man:	1
Leptospirosis:	38	Trichinosis:	77
Plague:	2	Typhus, murine:	31

**BOTULISM — Continued**

(ABE) botulinal antitoxin prophylactically; she has remained asymptomatic.

The chili sauce was canned at home in August 1973. The peppers were ground in a blender, boiled for 45 minutes, and then placed in 20 hot jars which contained only salt. The jar in question was the only one that was opened. A "popping" sound was heard when its lid was removed, but the sauce smelled and tasted normal.

Type A botulinal toxin was detected in the pretreatment serum and stool specimens of the 4 symptomatic patients and in left-over chili sauce. A pretreatment serum specimen and a post-treatment stool specimen from the

asymptomatic individual were negative for botulinal toxin. (Reported by Cynthia A. Lacy, M.D., and James E. Lewis M.D., private physicians, Sunnyvale Medical Clinic, Sunnyvale, California; Robert L. Weinmann, M.D., private neurologist, San Jose, California; Harvey De Boer, M.P.H., Laboratory Director, John Turner, R.S., Supervising Sanitarian, and Mary H. Clark, M.D., M.P.H., Deputy Director, Santa Clara County Health Department; Thaddeus F. Midura, Ph.D., Research Microbiologist, Microbial Diseases Laboratory, Michael P. Hudgins, M.D., Resident in Preventive Medicine, S. Benson Werner, M.D., Medical Epidemiologist, Infectious Disease Section, California State Department of Health; and an EIS Officer.)

**INFLUENZA — California, Georgia, the United States****Influenza A**

As reported previously (MMWR, Vol. 22, No. 47), the first virologically confirmed cases of influenza A in North America occurred in a retired physician and his wife who returned in October from The International Congress of Allergy in Tokyo, Japan. Eighty-three American physicians from 22 states and the District of Columbia attended this meeting and returned on the same charter flight as the affected Canadians. CDC, with the cooperation of the state epidemiologists, sent questionnaires to these 83 physicians to determine whether they had had influenza-like disease while in Japan or upon their return to the United States. An influenza-like disease was defined as fever, headache, and 1 or more of the following: cough, malaise, myalgia, or rhinorrhea. A possible influenza-like illness was defined as 2 or more symptoms without fever.

Seventy (85%) of the 83 physicians responded to the questionnaire. Eighteen (26%) had an influenza-like illness, and 9 (13%) had a possible influenza-like disease. None of the cases were confirmed either serologically or virologically. (Reported by the Viral Diseases Branch, Bureau of Epidemiology, CDC.)

**Influenza B**

**California:** The first virologically confirmed cases of influenza in the United States have occurred in California. Two boys, aged 9 and 10, had an illness characterized by vomiting, headache, cough, and nasal congestion during the first week in December. Chest x-rays were normal; however, 1 boy had a leukopenia. Viral cultures from both boys have grown a virus similar to B/Hong Kong/5/72.

Shortly before the boys became ill, their mother had an illness characterized by fever, headache, nasal congestion, and cough. Five days after the onset of this illness she developed right-sided pleuritic chest pain and dyspnea. She was admitted to the emergency room of a local hospital in San Mateo County where she was found to be cyanotic, febrile (temperature 102.6°F), and hypotensive (blood pressure 90/0). Her white blood cell count was 700 with 6 polymorphonuclear leukocytes, 8 "stabs", 53 lymphocytes, 13 monocytes, and 20 metamyelocytes. Her chest x-ray showed motting over 1 lung field and the base of the other lung field. She died 5 hours after admission to the hospital. Postmortem studies showed that she had *Staphylococcus aureus* septicemia, pulmonary edema, and a viral pneumonitis.

School and industrial absenteeism as well as hospital emergency room visits appear to be at normal levels for San Mateo County and San Francisco County, indicating that there is not widespread disease in those areas.

(Reported by George W. Frecker, Jr., M.D., Myron M. Faber, M.D., Gerald Harris, M.D., private physicians, Daly City, California; Arthur R. Lack, Jr., M.D., Pathologist, San Mateo County Coroner's Office; James M. Bodie, San Mateo County Health Department; the Viral and Rickettsial Disease Laboratory, and the Division of Epidemiology, California Department of Health.)

**Editorial Note**

This case report from California, while not conclusive, suggests that the mother of the 2 boys may have had influenza and spread it to her sons. The mother's case emphasizes that secondary bacterial pneumonia may complicate viral pneumonitis and that leukopenia which may occur with viral infections may make antibacterial treatment more difficult. In general, influenza is an uncomfortable but benign disease; however, this woman's case may demonstrate some of its rarer complications.

**Georgia:** A 9-month-old girl with a 4-day course of fever and cough was seen on December 20, 1973, in the emergency room of Grady Memorial Hospital in Atlanta. A throat culture was positive for a virus similar to B/Hong Kong/5/72. For the week ending December 23 the percentage of febrile respiratory disease in both the medical and pediatric emergency clinics had not changed from previous weeks, indicating that there is not widespread febrile respiratory disease in Atlanta.

(Reported by John McGowan, M.D., and William Marine, M.D., Grady Hospital Epidemiology Unit, Emory Departments of Medicine and Preventive Medicine and Community Health; Maurice Miot, Chief, Virology Laboratory, and John McCroan, Ph.D., State Epidemiologist, Georgia Department of Human Resources.)

**United States**

The WHO cooperating laboratories have to date reported to CDC that there have been 6 serologically confirmed cases of influenza A. They have occurred in Kansas, North Carolina, Oregon (2), Tennessee, and Texas. In addition, there have been 3 serologically confirmed cases of influenza B in Minnesota, Missouri, and Oregon. However, no outbreaks of influenza-like disease have been reported in this country.

(Text continued on page 439)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING DECEMBER 22, 1973 AND DECEMBER 23, 1972 (51st WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES .....	35	-	2,268	17	210	17	10	3	119	956	963
NEW ENGLAND .....	-	-	390	-	3	1	-	-	4	61	65
Maine *	-	-	-	-	-	-	-	-	-	-	3
New Hampshire*	-	-	27	-	-	-	-	-	-	3	8
Vermont .....	-	-	38	-	-	-	-	-	-	22	1
Massachusetts .....	-	-	188	-	1	1	-	-	-	18	34
Rhode Island .....	-	-	57	-	2	-	-	-	1	9	-
Connecticut .....	-	-	80	-	-	-	-	-	3	9	19
MIDDLE ATLANTIC .....	12	-	34	-	-	1	-	1	18	116	161
Upstate New York .....	2	-	-	-	-	-	-	1	3	48	35
New York City .....	-	-	30	-	-	-	-	-	1	6	37
New Jersey .....	7	-	NN	-	-	1	-	-	7	41	38
Pennsylvania .....	3	-	4	-	-	-	-	-	7	21	51
EAST NORTH CENTRAL .....	5	-	967	-	2	6	3	-	21	218	160
Ohio*	1	-	32	-	1	3	2	-	3	38	46
Indiana *	1	-	70	-	-	-	-	-	1	7	12
Illinois .....	1	-	-	-	1	-	-	-	4	79	28
Michigan .....	2	-	465	-	-	3	-	-	9	81	68
Wisconsin .....	-	-	400	-	-	-	1	-	4	13	6
WEST NORTH CENTRAL .....	2	-	252	-	7	-	2	-	8	38	39
Minnesota .....	2	-	-	-	-	-	-	-	-	4	5
Iowa .....	-	-	228	-	-	-	1	-	-	-	3
Missouri .....	-	-	3	-	-	-	1	-	5	13	25
North Dakota .....	-	-	12	-	-	-	-	-	-	3	-
South Dakota .....	-	-	1	-	7	-	-	-	-	10	3
Nebraska .....	-	-	-	-	-	-	-	-	1	2	-
Kansas .....	-	-	8	-	-	-	-	-	2	6	3
SOUTH ATLANTIC .....	6	-	179	-	9	3	3	-	20	201	132
Delaware .....	-	-	-	-	-	-	-	-	-	1	6
Maryland .....	1	-	25	-	-	-	-	-	-	1	6
District of Columbia .....	-	-	1	-	-	-	-	-	1	1	5
Virginia .....	2	-	4	-	-	-	-	-	-	21	16
West Virginia *	1	-	130	-	-	-	-	-	-	6	3
North Carolina .....	-	-	NN	-	-	-	-	-	-	13	24
South Carolina .....	-	-	19	-	-	1	-	-	2	19	5
Georgia .....	-	-	-	-	2	-	-	-	-	32	13
Florida .....	2	-	-	-	7	2	3	-	17	107	54
EAST SOUTH CENTRAL .....	1	-	54	-	5	2	-	-	4	52	66
Kentucky .....	-	-	53	-	-	-	-	-	-	16	19
Tennessee .....	1	-	NN	-	-	-	-	-	-	29	25
Alabama .....	-	-	1	-	5	-	-	-	2	2	15
Mississippi .....	-	-	-	-	-	2	-	-	2	5	7
WEST SOUTH CENTRAL .....	1	-	3	-	19	-	1	-	-	24	87
Arkansas .....	-	-	-	-	-	-	1	-	-	3	3
Louisiana*	-	-	NN	-	2	-	-	-	-	7	19
Oklahoma .....	1	-	3	-	-	-	-	-	-	14	4
Texas .....	---	---	---	---	17	---	-	---	---	---	61
MOUNTAIN .....	-	-	65	-	51	-	-	-	1	85	55
Montana .....	-	-	33	-	-	-	-	-	-	7	5
Idaho .....	-	-	-	-	-	-	-	-	1	5	7
Wyoming .....	-	-	-	-	-	-	-	-	-	-	1
Colorado .....	-	-	16	-	-	-	-	-	-	2	12
New Mexico .....	-	-	12	-	27	-	-	-	-	11	6
Arizona .....	-	-	-	-	24	-	-	-	-	48	12
Utah .....	-	-	3	-	-	-	-	-	-	11	10
Nevada .....	-	-	1	-	-	-	-	-	-	1	2
PACIFIC .....	8	-	324	17	114	4	1	2	43	161	198
Washington .....	-	-	297	16	102	-	-	-	1	13	23
Oregon .....	-	-	-	-	4	-	-	-	3	24	37
California .....	8	-	-	1	6	4	1	2	39	123	122
Alaska .....	-	-	11	-	2	-	-	-	-	-	11
Hawaii .....	-	-	16	-	-	-	-	-	-	1	5
Guam *	-	-	-	-	-	-	-	-	-	-	2
Puerto Rico .....	-	-	5	-	-	-	-	-	1	12	17
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: W. Va. 1  
Chickenpox: Me. 34, N. H. 11, Guam 1  
Diphtheria: La. 1

Hepatitis B: Ohio 1, La. 3  
Hepatitis A: Me. 6, N. H. 2, Ohio delete 1, Ind. delete 1  
W. Va. delete 2, La. 5, Guam 5

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING DECEMBER 22, 1973 AND DECEMBER 23, 1972 (51st WEEK) — Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	1	236	230	26,484	31,059	18	1,336	1,313	1,234	68,043	191	27,821
NEW ENGLAND .....	—	17	21	7,656	4,440	1	55	56	179	4,727	12	3,731
Maine *	—	—	—	70	256	1	2	4	1	505	—	7
New Hampshire*	—	—	10	1,033	836	—	7	3	19	266	1	38
Vermont .....	—	2	1	121	128	—	3	—	2	278	1	4
Massachusetts .....	—	7	3	3,969	1,186	—	15	25	59	1,277	5	2,091
Rhode Island .....	—	1	6	645	526	—	3	12	52	856	2	22
Connecticut .....	—	7	1	1,818	1,508	—	25	12	46	1,545	3	90
MIDDLE ATLANTIC .....	—	39	45	2,911	1,184	1	185	165	105	8,106	9	4,311
Upstate New York .....	—	19	2	823	178	—	65	40	NN	NN	2	47
New York City .....	—	4	2	951	439	—	36	45	13	4,748	4	49
New Jersey .....	—	5	41	737	500	1	49	32	29	1,679	2	3,021
Pennsylvania .....	—	11	—	400	67	—	35	48	63	1,679	1	30
EAST NORTH CENTRAL .....	—	31	107	9,163	12,335	3	182	194	328	17,334	76	6,491
Ohio .....	—	5	44	361	310	1	77	78	24	3,138	3	71
Indiana .....	—	3	6	713	1,368	—	6	14	24	1,756	1	1,011
Illinois .....	—	17	22	2,204	4,478	—	28	40	68	2,869	48	1,101
Michigan .....	—	6	20	4,533	2,329	1	53	54	160	4,895	15	1,981
Wisconsin .....	—	—	15	1,352	3,850	1	18	8	52	4,676	9	1,671
WEST NORTH CENTRAL .....	—	10	3	467	1,375	—	93	94	114	5,871	1	1,241
Minnesota .....	—	2	—	24	27	—	13	25	2	105	1	22
Iowa .....	—	1	—	281	1,032	—	22	6	96	3,742	—	208
Missouri .....	—	3	—	56	181	—	34	30	4	787	—	273
North Dakota .....	—	1	3	70	60	—	3	—	2	78	—	277
South Dakota .....	—	—	—	3	12	—	5	2	—	20	—	23
Nebraska .....	—	1	—	6	24	—	7	11	4	190	—	141
Kansas .....	—	2	—	27	39	—	9	20	6	949	—	95
SOUTH ATLANTIC .....	—	37	2	1,328	2,335	3	224	291	122	7,613	20	2,387
Delaware .....	—	—	—	10	56	—	2	1	3	285	—	16
Maryland .....	—	8	—	14	15	—	31	40	3	699	—	11
District of Columbia .....	—	2	—	8	2	—	5	12	3	163	—	4
Virginia .....	—	8	—	429	77	1	47	62	3	780	—	636
West Virginia *	—	—	—	232	303	—	7	9	42	2,634	1	346
North Carolina .....	—	7	—	4	38	—	43	35	NN	NN	2	204
South Carolina .....	—	1	1	79	217	—	13	29	3	377	—	88
Georgia .....	—	3	—	154	195	—	23	22	—	32	—	13
Florida .....	—	8	1	398	1,432	2	53	81	65	2,643	17	1,069
EAST SOUTH CENTRAL .....	—	14	1	641	1,086	4	128	99	167	5,772	28	1,503
Kentucky .....	—	9	1	404	544	—	48	30	37	1,756	5	424
Tennessee .....	—	—	—	165	195	—	45	33	128	2,785	22	637
Alabama .....	—	5	—	14	154	1	19	20	1	744	—	209
Mississippi .....	—	—	—	58	193	3	16	16	1	487	1	233
WEST SOUTH CENTRAL .....	—	13	—	753	1,735	2	213	166	26	4,693	—	1,524
Arkansas .....	—	—	—	75	14	—	14	13	2	412	—	116
Louisiana*	—	2	—	89	110	—	53	51	15	132	—	100
Oklahoma .....	—	2	—	66	11	2	35	14	9	493	—	182
Texas .....	---	9	---	523	1,600	---	111	88	---	3,656	---	1,126
MOUNTAIN .....	—	9	35	1,073	1,971	2	39	32	52	2,821	15	2,457
Montana .....	—	1	33	337	18	1	10	6	31	313	13	531
Idaho .....	—	1	—	256	156	—	4	8	1	130	—	45
Wyoming .....	—	—	—	81	51	—	1	1	—	436	—	7
Colorado .....	—	2	1	111	540	—	11	6	16	605	1	1,570
New Mexico .....	—	2	—	136	139	—	3	3	4	1,031	—	212
Arizona .....	—	2	1	22	907	1	6	1	—	140	1	8
Utah .....	—	1	—	129	159	—	2	6	—	157	—	80
Nevada .....	—	—	—	1	1	—	2	1	—	9	—	4
PACIFIC .....	1	66	16	2,492	4,598	2	217	216	141	11,106	30	4,173
Washington .....	—	4	—	1,110	996	—	22	20	30	1,907	9	769
Oregon .....	—	4	—	461	196	—	17	14	45	2,104	5	828
California .....	1	55	16	836	3,295	2	167	170	62	5,887	14	2,529
Alaska .....	—	2	—	65	13	—	10	9	3	929	—	19
Hawaii .....	—	1	—	20	98	—	1	3	1	279	2	28
Guam *	—	—	—	52	17	—	1	13	—	37	—	14
Puerto Rico .....	—	—	22	2,031	1,088	—	11	4	25	942	—	39
Virgin Islands .....	—	—	—	7	3	—	—	2	—	34	—	2

\*Delayed reports: Measles: N. H. 9  
Mumps: Me. 24, N. H. 11, Guam 3  
Meningococcal infections: W. Va. 1, La. 1  
Rubella: Me. 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING DECEMBER 22, 1973 AND DECEMBER 23, 1972 (51st WEEK) — Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum: 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES . . . . .	87	520	30,570	157	4	619	8	635	13,471	421	32	3,255
NEW ENGLAND . . . . .	2	19	1,154	—	—	21	—	4	357	6	1	117
Maine . . . . .	—	3	107	—	—	—	—	—	29	—	1	64
New Hampshire . . . . .	—	1	55	—	—	—	—	—	14	—	—	37
Vermont . . . . .	—	—	30	—	—	—	—	—	—	—	—	3
Massachusetts . . . . .	—	12	619	—	—	17	—	3	165	6	—	6
Rhode Island . . . . .	1	—	90	—	—	—	—	—	41	—	—	1
Connecticut . . . . .	1	3	253	—	—	4	—	1	108	—	—	6
MIDDLE ATLANTIC . . . . .	7	85	5,880	—	—	66	—	38	1,951	81	—	54
Upstate New York . . . . .	1	12	1,029	—	—	10	—	13	572	7	—	26
New York City . . . . .	3	27	2,170	—	—	26	—	4	668	36	—	—
New Jersey . . . . .	2	11	1,049	—	—	20	—	5	271	14	—	—
Pennsylvania . . . . .	1	35	1,632	—	—	10	—	16	440	24	—	28
EAST NORTH CENTRAL . . . . .	13	92	4,532	3	—	50	—	19	1,881	19	2	314
Ohio* . . . . .	3	29	1,335	—	—	20	—	14	507	8	—	38
Indiana . . . . .	4	16	582	—	—	1	—	—	247	—	—	53
Illinois . . . . .	3	28	1,407	1	—	11	—	5	266	—	—	72
Michigan . . . . .	1	19	1,131	2	—	14	—	—	658	10	—	11
Wisconsin* . . . . .	2	—	77	—	—	4	—	—	203	1	2	140
WEST NORTH CENTRAL . . . . .	7	26	1,283	22	—	29	—	25	1,046	5	10	1,018
Minnesota . . . . .	—	3	152	—	—	8	—	2	221	1	5	386
Iowa . . . . .	—	1	127	—	—	—	—	7	149	—	2	205
Missouri . . . . .	6	15	624	21	—	13	—	9	306	3	1	92
North Dakota . . . . .	1	2	40	—	—	—	—	—	13	—	2	153
South Dakota . . . . .	—	4	89	—	—	1	—	1	52	—	—	81
Nebraska . . . . .	—	—	81	—	—	1	—	2	110	1	—	7
Kansas . . . . .	—	1	170	1	—	6	—	4	195	—	—	94
SOUTH ATLANTIC . . . . .	20	132	6,100	19	1	254	8	315	3,587	161	5	297
Delaware . . . . .	—	1	97	—	—	1	—	8	57	—	—	5
Maryland . . . . .	—	6	662	6	—	9	—	14	320	20	—	15
District of Columbia . . . . .	—	12	301	—	—	1	—	—	258	19	—	—
Virginia . . . . .	3	25	819	6	—	3	—	61	387	26	2	97
West Virginia . . . . .	1	6	308	—	—	12	—	4	47	—	—	24
North Carolina* . . . . .	—	23	978	2	—	5	—	141	450	45	—	14
South Carolina . . . . .	2	—	485	—	1	7	—	32	256	12	—	6
Georgia . . . . .	3	20	964	3	—	3	8	54	910	15	3	94
Florida . . . . .	11	39	1,486	2	—	213	—	1	902	24	—	42
EAST SOUTH CENTRAL . . . . .	9	44	2,824	10	2	46	—	112	1,091	7	—	401
Kentucky . . . . .	1	7	637	1	—	11	—	—	122	2	—	210
Tennessee . . . . .	5	14	874	7	—	16	—	52	308	3	—	148
Alabama . . . . .	3	15	795	—	—	10	—	28	394	2	—	42
Mississippi . . . . .	—	8	518	2	2	9	—	32	267	—	—	1
WEST SOUTH CENTRAL . . . . .	15	21	3,154	92	1	27	—	106	802	17	—	565
Arkansas . . . . .	1	8	388	62	1	6	—	20	91	1	—	116
Louisiana . . . . .	4	8	453	1	—	6	—	—	570	7	—	51
Oklahoma . . . . .	4	5	281	21	—	2	—	75	141	9	—	160
Texas . . . . .	6	---	2,032	8	---	13	---	11	---	---	---	238
MOUNTAIN . . . . .	—	18	1,042	8	—	14	—	8	657	20	—	56
Montana . . . . .	—	2	59	—	—	—	—	1	25	—	—	10
Idaho . . . . .	—	—	32	1	—	1	—	2	53	—	—	—
Wyoming . . . . .	—	2	32	2	—	1	—	1	14	—	—	—
Colorado . . . . .	—	—	212	—	—	2	—	1	223	7	—	—
New Mexico . . . . .	—	9	218	2	—	4	—	3	79	7	—	7
Arizona . . . . .	—	—	373	—	—	6	—	—	245	4	—	36
Utah . . . . .	—	4	54	2	—	—	—	—	10	—	—	3
Nevada . . . . .	—	1	62	1	—	—	—	—	8	2	—	—
PACIFIC . . . . .	14	83	4,601	3	—	112	—	8	2,099	105	14	433
Washington . . . . .	3	10	356	1	—	7	—	5	198	—	—	9
Oregon . . . . .	—	2	243	1	—	2	—	2	210	2	—	8
California . . . . .	11	64	3,617	1	—	98	—	1	1,613	101	14	408
Alaska . . . . .	—	—	105	—	—	4	—	—	33	1	—	8
Hawaii . . . . .	—	7	280	—	—	1	—	—	45	1	—	—
Guam* . . . . .	—	—	39	—	—	—	—	—	—	—	—	—
Puerto Rico . . . . .	11	4	491	—	—	11	—	—	106	14	1	55
Virgin Islands . . . . .	—	—	2	—	—	—	—	—	—	—	—	—

\*Delayed reports: TB: Ohio delete 4, N. C. delete 3  
Gonorrhea: Guam 7  
Syphilis: Wis. delete 1

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING DECEMBER 22, 1973

Week No.

51

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	736	472	26	38	SOUTH ATLANTIC	1,093	634	32	4
Boston, Mass.	218	133	11	9	Atlanta, Ga.	124	63	4	4
Bridgeport, Conn.	53	32	1	4	Baltimore, Md.	172	97	3	3
Cambridge, Mass.	28	23	—	7	Charlotte, N. C.	54	33	3	3
Fall River, Mass.	32	24	—	1	Jacksonville, Fla.	101	65	5	5
Hartford, Conn.	74	37	5	2	Miami, Fla.	124	60	4	4
Lowell, Mass.	25	18	2	2	Norfolk, Va.	50	26	1	1
Lynn, Mass.	25	19	—	1	Richmond, Va.	64	37	1	1
New Bedford, Mass.	25	22	—	1	Savannah, Ga.	56	19	3	3
New Haven, Conn.	52	32	3	2	St. Petersburg, Fla.	107	92	—	—
Providence, R. I.	56	33	1	2	Tampa, Fla.	63	47	3	3
Somerville, Mass.	15	11	—	1	Washington, D. C.	149	82	3	3
Springfield, Mass.	56	36	1	2	Wilmington, Del.	29	13	2	2
Waterbury, Conn.	22	18	—	—	EAST SOUTH CENTRAL	731	418	34	38
Worcester, Mass.	55	34	2	4	Birmingham, Ala.	106	55	11	2
MIDDLE ATLANTIC	3,191	1,928	85	111	Chattanooga, Tenn.	56	38	2	5
Albany, N. Y.	53	38	2	—	Knoxville, Tenn.	65	36	3	1
Allentown, Pa.	23	16	—	1	Louisville, Ky.	127	75	4	8
Buffalo, N. Y.	142	79	3	9	Memphis, Tenn.	153	80	6	3
Camden, N. J.	46	22	2	1	Mobile, Ala.	73	45	4	4
Elizabeth, N. J.	29	17	—	—	Montgomery, Ala.	56	34	1	7
Erie, Pa.	40	22	—	4	Nashville, Tenn.	95	55	3	8
Jersey City, N. J.	56	37	1	3	WEST SOUTH CENTRAL	1,228	675	69	43
Newark, N. J.	71	27	10	—	Austin, Tex.	31	22	1	2
New York City, N. Y.†	1,563	962	41	57	Baton Rouge, La.	46	20	2	3
Paterson, N. J.	52	31	—	3	Corpus Christi, Tex.	30	18	2	—
Philadelphia, Pa.	502	274	14	5	Dallas, Tex.	194	109	11	3
Pittsburgh, Pa.	184	104	5	11	El Paso, Tex.	48	28	3	7
Reading, Pa.	34	25	—	1	Fort Worth, Tex.	78	46	5	3
Rochester, N. Y.	138	94	3	8	Houston, Tex.	267	135	11	7
Schenectady, N. Y.	29	24	—	—	Little Rock, Ark.	60	32	7	5
Scranton, Pa.	42	28	—	1	New Orleans, La.	172	104	6	1
Syracuse, N. Y.	89	60	2	—	San Antonio, Tex.	164	80	15	5
Trenton, N. J.	42	26	1	2	Shreveport, La.	76	42	3	2
Utica, N. Y.	23	16	1	3	Tulsa, Okla.	62	39	3	5
Yonkers, N. Y.	33	26	—	2	MOUNTAIN	571	352	20	26
EAST NORTH CENTRAL	2,508	1,437	106	73	Albuquerque, N. Mex.	51	25	4	1
Akron, Ohio	47	17	5	—	Colorado Springs, Colo.	37	22	—	4
Canton, Ohio	43	28	—	3	Denver, Colo.	121	77	2	3
Chicago, Ill.	705	386	18	19	Las Vegas, Nev.	31	13	1	1
Cincinnati, Ohio	141	90	6	3	Ogden, Utah	31	21	2	3
Cleveland, Ohio	200	105	10	4	Phoenix, Ariz.	140	96	6	3
Columbus, Ohio	134	70	12	4	Pueblo, Colo.	33	24	1	7
Dayton, Ohio	109	62	5	3	Salt Lake City, Utah	53	32	2	4
Detroit, Mich.	338	176	25	8	Tucson, Ariz.	74	42	2	—
Evansville, Ind.	49	33	1	1	PACIFIC	1,754	1,128	51	39
Fort Wayne, Ind.	38	20	—	—	Berkeley, Calif.	25	17	—	1
Gary, Ind.	37	16	2	5	Fresno, Calif.	72	46	2	1
Grand Rapids, Mich.	55	37	1	1	Glendale, Calif.	26	17	—	—
Indianapolis, Ind.	149	98	5	6	Honolulu, Hawaii	46	23	2	—
Madison, Wis.	49	31	1	7	Long Beach, Calif.	95	61	3	3
Milwaukee, Wis.	128	82	5	2	Los Angeles, Calif.	557	353	23	8
Peoria, Ill.	38	28	3	—	Oakland, Calif.	91	66	3	—
Rockford, Ill.	43	30	—	4	Pasadena, Calif.	47	36	2	—
South Bend, Ind.	41	26	2	3	Portland, Oreg.	138	86	3	1
Toledo, Ohio	98	59	3	—	Sacramento, Calif.	78	47	—	2
Youngstown, Ohio	66	43	2	—	San Diego, Calif.	142	85	1	1
WEST NORTH CENTRAL	835	538	34	30	San Francisco, Calif.	172	113	4	9
Des Moines, Iowa	78	54	1	1	San Jose, Calif.	53	40	3	3
Duluth, Minn.	15	13	—	2	Seattle, Wash.	136	79	4	3
Kansas City, Kans.	34	11	1	1	Spokane, Wash.	42	33	1	6
Kansas City, Mo.	148	103	5	2	Tacoma, Wash.	34	26	—	1
Lincoln, Nebr.	36	25	1	1	Total	12,647	7,582	457	442
Minneapolis, Minn.	96	67	5	3	Expected Number	12,918	7,675	466	474
Omaha, Nebr.	59	40	2	1	Cumulative Total (includes reported corrections for previous weeks)	647,416	381,028	24,316	25,303
St. Louis, Mo.	192	109	6	7					
St. Paul, Minn.	89	62	4	2					
Wichita, Kans.	88	54	9	10					

†Delayed report for week ending December 15, 1973

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING DECEMBER 29, 1973 AND DECEMBER 30, 1972 (52nd WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
	1973	1973	1973	1973	Cum. 1973	1973	1972	1973	1973	1973	1972
UNITED STATES .....	36	2	1,732	5	214	10	27	2	121	578	762
NEW ENGLAND .....	1	-	308	-	3	1	-	-	3	54	59
Maine *	-	-	5	-	-	-	-	-	-	2	12
New Hampshire *	-	-	9	-	-	-	-	-	-	5	5
Vermont .....	-	-	3	-	-	-	-	-	-	3	2
Massachusetts .....	1	-	138	-	1	1	-	-	1	37	19
Rhode Island .....	-	-	51	-	2	-	-	-	2	2	7
Connecticut .....	-	-	102	-	-	-	-	-	-	5	14
MIDDLE ATLANTIC .....	2	-	40	-	-	1	3	1	15	68	88
Upstate New York .....	-	-	1	-	-	-	-	-	-	10	19
New York City .....	2	-	29	-	-	-	-	-	3	13	19
New Jersey .....	-	-	NN	-	-	1	1	-	1	23	33
Pennsylvania .....	-	-	10	-	-	-	2	1	11	22	17
EAST NORTH CENTRAL .....	11	-	795	-	2	3	3	-	11	104	143
Ohio .....	1	-	116	-	1	-	-	-	-	23	9
Indiana .....	-	-	54	-	-	1	-	-	1	6	1
Illinois .....	---	---	---	---	1	---	1	---	---	---	52
Michigan .....	10	-	235	-	-	2	1	-	10	73	78
Wisconsin .....	-	-	390	-	-	-	1	-	-	2	3
WEST NORTH CENTRAL .....	8	2	226	-	7	3	12	-	2	20	47
Minnesota .....	-	-	64	-	-	-	5	-	-	-	5
Iowa .....	-	2	152	-	-	-	7	-	1	3	6
Missouri .....	8	-	3	-	-	3	-	-	1	6	13
North Dakota .....	-	-	3	-	-	-	-	-	-	1	1
South Dakota .....	-	-	-	-	7	-	-	-	-	5	1
Nebraska .....	-	-	-	-	-	-	-	-	-	1	1
Kansas .....	-	-	4	-	-	-	-	-	-	4	20
SOUTH ATLANTIC .....	1	-	129	-	9	-	3	-	-	32	106
Delaware .....	---	---	---	---	-	---	-	---	---	---	2
Maryland .....	---	---	---	---	-	---	-	---	---	---	10
District of Columbia .....	-	-	1	-	-	-	-	-	-	1	1
Virginia .....	-	-	3	-	-	-	-	-	-	2	-
West Virginia*	1	-	122	-	-	-	-	-	-	3	3
North Carolina .....	-	-	NN	-	-	-	1	-	-	7	15
South Carolina .....	-	-	3	-	-	-	-	-	-	5	5
Georgia .....	-	-	-	-	2	-	-	-	-	14	35
Florida .....	-	-	-	-	7	-	2	-	-	-	35
EAST SOUTH CENTRAL .....	-	-	28	1	6	-	2	1	8	39	43
Kentucky .....	-	-	6	-	-	-	-	1	-	3	7
Tennessee .....	-	-	NN	-	-	-	-	-	5	27	26
Alabama .....	-	-	18	1	6	-	1	-	-	2	1
Mississippi .....	-	-	4	-	-	-	1	-	3	7	9
WEST SOUTH CENTRAL .....	1	-	3	-	19	-	1	-	3	19	56
Arkansas .....	-	-	-	-	-	-	-	-	-	4	8
Louisiana .....	-	-	NN	-	2	-	1	-	3	5	9
Oklahoma .....	1	-	3	-	-	-	-	-	-	10	17
Texas *	---	---	---	---	17	---	-	---	---	---	22
MOUNTAIN .....	1	-	71	1	51	1	2	-	15	90	49
Montana .....	-	-	41	-	-	-	-	-	-	6	7
Idaho .....	-	-	-	-	-	-	-	-	-	1	13
Wyoming .....	-	-	-	-	-	-	-	-	-	-	-
Colorado .....	1	-	11	-	-	1	2	-	3	34	5
New Mexico .....	-	-	19	-	27	-	-	-	12	26	5
Arizona *	-	-	-	1	24	-	-	-	-	19	17
Utah .....	---	---	---	---	-	---	-	---	---	---	2
Nevada .....	-	-	-	-	-	-	-	-	-	4	-
PACIFIC .....	11	-	132	3	117	1	1	-	64	152	171
Washington .....	1	-	114	3	105	-	-	-	9	12	6
Oregon .....	-	-	-	-	4	-	-	-	-	2	17
California .....	10	-	-	-	6	1	1	-	54	133	107
Alaska .....	-	-	14	-	2	-	-	-	-	3	35
Hawaii .....	-	-	4	-	-	-	-	-	1	2	6
Guam *	-	-	-	-	-	-	-	-	-	-	1
Puerto Rico .....	---	---	---	---	-	---	-	---	---	---	1
Virgin Islands .....	-	-	-	-	-	-	-	-	-	-	-

\* Delayed Reports:

Aseptic meningitis: Tex. 3  
 Brucellosis: Tex. 1  
 Chickenpox: Me. 12, N.H. 10, Tex. 153, Guam 1  
 Diphtheria: Ariz. delete 1

Encephalitis, primary: Tex. 1  
 Hepatitis B: Tex. 5  
 Hepatitis A: Me. 4, N.H. 1, W.Va. delete 1,  
 Tex. 76, Guam 3

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING DECEMBER 29, 1973 AND DECEMBER 30, 1972 (52nd WEEK) — Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	3	239	198	26,686	31,580	12	1,349	1,332	936	69,087	100	27,928
NEW ENGLAND .....	1	18	12	7,671	4,527	1	56	58	153	4,923	2	3,735
Maine* .....	—	—	—	71	257	—	2	4	3	521	—	74
New Hampshire* .....	—	—	8	1,043	885	—	7	4	4	300	—	385
Vermont .....	1	3	—	121	128	—	3	—	—	278	—	49
Massachusetts .....	—	7	1	3,970	1,190	1	16	25	40	1,317	2	2,092
Rhode Island .....	—	1	2	647	527	—	3	12	54	910	—	229
Connecticut .....	—	7	1	1,819	1,540	—	25	13	52	1,597	—	906
MIDDLE ATLANTIC .....	1	40	49	2,960	1,241	1	186	168	81	8,187	2	4,317
Upstate New York .....	1	20	4	827	224	—	65	40	NN	NN	1	480
New York City .....	—	4	2	953	447	—	36	46	13	4,761	—	499
New Jersey .....	—	5	34	771	500	1	50	33	5	1,684	—	3,028
Pennsylvania .....	—	11	9	409	70	—	35	49	63	1,742	1	310
EAST NORTH CENTRAL .....	—	31	78	9,241	12,492	4	186	195	318	17,652	50	6,543
Ohio .....	—	5	43	404	312	2	79	78	77	3,215	21	737
Indiana .....	—	3	—	713	1,372	1	7	14	30	1,786	3	1,018
Illinois .....	---	17	---	2,204	4,586	---	28	40	---	2,869	---	1,101
Michigan .....	—	6	19	4,552	2,353	1	54	55	147	5,042	17	2,001
Wisconsin .....	—	—	16	1,368	3,869	—	18	8	64	4,740	9	1,686
WEST NORTH CENTRAL .....	—	10	3	470	1,435	1	94	95	146	6,017	3	1,245
Minnesota .....	—	2	—	24	28	—	13	26	—	105	—	225
Iowa .....	—	1	2	283	1,050	—	22	6	135	3,877	—	208
Missouri .....	—	3	—	56	221	—	34	30	1	788	1	274
North Dakota .....	—	1	1	71	61	—	3	—	—	78	—	277
South Dakota .....	—	—	—	3	12	1	6	2	—	20	1	24
Nebraska .....	—	1	—	6	24	—	7	11	—	190	—	141
Kansas .....	—	2	—	27	39	—	9	20	10	959	1	96
SOUTH ATLANTIC .....	—	37	2	1,330	2,368	—	224	299	32	7,645	3	2,390
Delaware .....	---	—	---	10	56	---	2	2	---	285	---	16
Maryland .....	---	8	---	14	15	---	31	40	---	699	---	11
District of Columbia .....	—	2	1	9	2	—	5	14	1	164	—	4
Virginia .....	—	8	1	430	77	—	47	62	2	782	—	636
West Virginia .....	—	—	—	232	306	—	7	10	29	2,663	1	347
North Carolina .....	—	7	—	4	38	—	43	37	NN	NN	—	204
South Carolina .....	—	1	—	79	218	—	13	29	—	377	—	88
Georgia .....	—	3	—	154	212	—	23	23	—	32	2	15
Florida .....	—	8	—	398	1,444	—	53	82	—	2,643	—	1,069
EAST SOUTH CENTRAL .....	—	14	—	641	1,135	1	129	101	64	5,836	10	1,513
Kentucky .....	—	9	—	404	546	—	48	30	3	1,759	—	424
Tennessee .....	—	—	—	165	195	—	45	34	46	2,831	8	645
Alabama .....	—	5	—	14	154	—	19	20	14	758	1	210
Mississippi .....	—	—	—	58	240	1	17	17	1	488	1	234
WEST SOUTH CENTRAL .....	—	13	1	755	1,790	1	215	168	16	4,774	2	1,527
Arkansas .....	—	—	—	75	48	—	14	14	3	415	—	116
Louisiana .....	—	2	1	90	112	1	54	51	—	132	—	100
Oklahoma .....	—	2	—	66	12	—	35	15	13	506	2	184
Texas* .....	---	9	---	524	1,618	---	112	88	---	3,721	---	1,127
MOUNTAIN .....	—	9	40	1,113	1,972	—	39	32	34	2,855	10	2,467
Montana .....	—	1	21	358	18	—	10	6	2	315	—	531
Idaho .....	—	1	—	256	157	—	4	8	3	133	—	45
Wyoming .....	—	—	—	81	51	—	1	1	—	436	—	7
Colorado .....	—	2	1	112	540	—	11	6	11	616	—	1,570
New Mexico .....	—	2	18	154	139	—	3	3	13	1,044	1	213
Arizona .....	—	2	—	22	907	—	6	1	—	140	—	8
Utah .....	---	1	---	129	159	---	2	6	---	157	---	80
Nevada .....	—	—	—	1	1	—	2	1	5	14	9	13
PACIFIC .....	1	67	13	2,505	4,620	3	220	216	92	11,198	18	4,191
Washington .....	—	4	1	1,111	996	1	23	20	33	1,940	9	778
Oregon .....	—	4	—	461	205	—	17	14	6	2,110	—	828
California .....	1	56	12	848	3,308	1	168	170	48	5,935	9	2,538
Alaska .....	—	2	—	65	13	1	11	9	3	932	—	19
Hawaii .....	—	1	—	20	98	—	1	3	2	281	—	28
Guam* .....	—	—	—	52	17	—	1	13	—	40	—	14
Puerto Rico* .....	---	—	---	2,031	1,089	---	11	4	---	1,117	---	39
Virgin Islands .....	—	—	—	7	3	—	—	2	—	34	—	2

\* Delayed Reports:

Measles: Me. 1, N.H. 2, Tex. 1  
Meningococcal infections: Tex. 1

Mumps: Me. 13, N.H. 30, Tex. 65, Guam 3, P.R. 175  
Rubella: Tex. 1

## Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING DECEMBER 29, 1973 AND DECEMBER 30, 1972 (52nd WEEK) - Continued

AREA	TETANUS	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
									1973	1973		
UNITED STATES .....	88	338	30,937	157	9	628	-	635	11,158	241	26	3,285
NEW ENGLAND .....	2	14	1,168	-	1	22	-	4	381	2	1	118
Maine .....	-	-	107	-	-	-	-	-	11	-	1	65
New Hampshire .....	-	1	56	-	-	-	-	-	16	-	-	37
Vermont .....	-	-	30	-	-	-	-	-	6	-	-	3
Massachusetts .....	-	8	627	-	-	17	-	3	207	2	-	6
Rhode Island .....	1	2	92	-	-	-	-	-	10	-	-	1
Connecticut .....	1	3	256	-	1	5	-	1	131	-	-	6
MIDDLE ATLANTIC .....	7	71	5,951	-	-	66	-	38	1,726	88	-	54
Upstate New York .....	1	11	1,040	-	-	10	-	13	328	3	-	26
New York City .....	3	15	2,185	-	-	26	-	4	495	58	-	-
New Jersey .....	2	11	1,060	-	-	20	-	5	266	15	-	-
Pennsylvania .....	1	34	1,666	-	-	10	-	16	637	12	-	28
EAST NORTH CENTRAL .....	13	20	4,539	3	-	50	-	19	1,648	13	-	314
Ohio * .....	3	-	1,322	-	-	20	-	14	536	1	-	38
Indiana .....	4	7	589	-	-	1	-	-	198	1	-	53
Illinois .....	3	---	1,407	1	---	11	---	5	---	---	---	72
Michigan .....	1	13	1,144	2	-	14	-	-	637	8	-	11
Wisconsin .....	2	-	77	-	-	4	-	-	277	3	-	140
WEST NORTH CENTRAL .....	7	25	1,308	22	-	29	-	25	687	14	11	1,029
Minnesota .....	-	6	158	-	-	8	-	2	155	-	3	389
Iowa .....	-	1	128	-	-	-	-	7	335	2	1	206
Missouri .....	6	15	639	21	-	13	-	9	25	10	1	93
North Dakota .....	1	2	42	-	-	-	-	-	6	-	6	159
South Dakota .....	-	1	90	-	-	1	-	1	20	-	-	81
Nebraska .....	-	-	81	-	-	1	-	2	73	2	-	7
Kansas .....	-	-	170	1	-	6	-	4	73	-	-	94
SOUTH ATLANTIC .....	20	38	6,136	19	-	254	-	315	2,263	50	-	297
Delaware .....	-	---	97	-	---	1	---	8	---	---	---	5
Maryland .....	-	---	662	6	---	9	---	14	---	---	---	15
District of Columbia .....	-	-	301	-	-	1	-	-	286	6	-	-
Virginia .....	3	-	819	6	-	3	-	61	-	-	-	97
West Virginia * .....	1	4	311	-	-	12	-	4	41	-	-	24
North Carolina * .....	-	9	986	2	-	5	-	141	-	-	-	14
South Carolina .....	2	2	487	-	-	7	-	32	132	11	-	6
Georgia .....	3	23	987	3	-	3	-	54	784	9	-	94
Florida .....	11	-	1,486	2	-	213	-	1	1,020	24	-	42
EAST SOUTH CENTRAL .....	9	25	2,849	10	5	51	-	112	1,049	13	6	407
Kentucky .....	1	-	637	1	1	12	-	-	92	6	4	214
Tennessee .....	5	16	890	7	-	16	-	52	425	6	2	150
Alabama .....	3	-	795	-	4	14	-	28	390	1	-	42
Mississippi .....	-	9	527	2	-	9	-	32	142	-	-	1
WEST SOUTH CENTRAL .....	16	11	3,209	92	-	27	-	106	729	9	5	574
Arkansas .....	1	1	389	62	-	6	-	20	362	-	-	116
Louisiana * .....	4	6	459	1	-	6	-	-	299	8	1	52
Oklahoma .....	4	4	285	21	-	2	-	75	68	1	4	164
Texas* .....	7	---	2,076	8	---	13	---	11	---	---	---	242
MOUNTAIN .....	-	41	1,083	8	-	14	-	8	437	11	-	56
Montana .....	-	2	61	-	-	-	-	1	39	-	-	10
Idaho .....	-	-	32	1	-	1	-	2	50	-	-	-
Wyoming .....	-	2	34	2	-	1	-	1	23	-	-	-
Colorado .....	-	18	230	-	-	2	-	1	139	4	-	-
New Mexico .....	-	5	223	2	-	4	-	3	36	3	-	7
Arizona .....	-	12	385	-	-	6	-	-	100	-	-	36
Utah .....	-	---	54	2	---	-	---	-	---	---	---	3
Nevada .....	-	2	64	1	-	-	-	-	50	4	-	-
PACIFIC .....	14	93	4,694	3	3	115	-	8	2,238	41	3	436
Washington .....	3	8	364	1	-	7	-	5	218	-	-	9
Oregon .....	-	2	245	1	-	2	-	2	354	2	-	8
California .....	11	79	3,696	1	3	101	-	1	1,583	39	3	411
Alaska .....	-	-	105	-	-	4	-	-	47	-	-	8
Hawaii .....	-	4	284	-	-	1	-	-	36	-	-	-
Guam* .....	-	-	41	-	-	-	-	-	-	-	-	-
Puerto Rico .....	11	---	491	-	---	11	---	-	---	---	---	55
Virgin Islands .....	-	-	2	-	-	-	-	-	9	-	-	-
Gonorrhea: La. delete 4, Tex. 1,521, Guam 11												

Gonorrhea: La. delete 4, Tex. 1,521, Guam 11  
Syphilis: Tex. 31  
Rabies: Tex. 4

\* Delayed Reports:

Tetanus: Tex. 1  
TB: Ohio delete 13, W.Va. delete 1, N.C. delete 1,  
Tex. 44, Guam 2

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING DECEMBER 29, 1973

Week No.

52

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	773	495	21	45	SOUTH ATLANTIC	1,152	679	31	38
Boston, Mass.	232	135	11	11	Atlanta, Ga.	133	74	5	1
Bridgeport, Conn.	37	30	—	3	Baltimore, Md.	181	97	2	2
Cambridge, Mass.	36	21	—	7	Charlotte, N. C.	39	19	1	—
Fall River, Mass.	26	21	—	—	Jacksonville, Fla.	95	50	2	3
Hartford, Conn.	79	53	1	1	Miami, Fla.	119	66	9	3
Lowell, Mass.	41	28	2	7	Norfolk, Va.	40	25	1	3
Lynn, Mass.	25	19	1	—	Richmond, Va.	82	47	1	9
New Bedford, Mass.	35	24	—	1	Savannah, Ga.	23	11	1	1
New Haven, Conn.	54	26	2	2	St. Petersburg, Fla.	126	111	—	3
Providence, R. I.	56	34	1	7	Tampa, Fla.	79	46	5	10
Somerville, Mass.	10	9	—	—	Washington, D. C.	186	102	3	3
Springfield, Mass.	39	27	—	1	Wilmington, Del.	49	31	1	—
Waterbury, Conn.	36	21	1	—	EAST SOUTH CENTRAL	464	267	16	16
Worcester, Mass.	67	47	2	5	Birmingham, Ala.	61	40	—	—
MIDDLE ATLANTIC	2,532	1,607	44	99	Chattanooga, Tenn.	58	27	4	1
Albany, N. Y.	69	47	2	3	Knoxville, Tenn.	29	20	—	2
Allentown, Pa.	38	27	—	5	Louisville, Ky.	90	52	6	6
Buffalo, N. Y.	134	78	3	6	Memphis, Tenn.	96	52	2	2
Camden, N. J.	50	28	1	—	Mobile, Ala.	30	20	1	—
Elizabeth, N. J.	32	21	—	1	Montgomery, Ala.	22	17	—	—
Erie, Pa.	49	32	—	4	Nashville, Tenn.	78	39	3	5
Jersey City, N. J.	48	34	—	1	WEST SOUTH CENTRAL	813	471	32	25
Newark, N. J.	81	41	4	3	Austin, Tex.	24	16	—	—
New York City, N. Y.*	1,271	810	19	45	Baton Rouge, La.	50	34	—	1
Paterson, N. J.	26	21	2	3	Corpus Christi, Tex.	24	13	5	—
Philadelphia, Pa.	200	126	2	4	Dallas, Tex.	99	47	4	—
Pittsburgh, Pa.	119	61	1	3	El Paso, Tex.	32	25	—	6
Reading, Pa.	41	29	1	2	Fort Worth, Tex.	62	39	2	2
Rochester, N. Y.	114	84	2	7	Houston, Tex.	180	102	8	—
Schenectady, N. Y.	40	31	—	—	Little Rock, Ark.	47	21	2	2
Scranton, Pa.	24	14	—	—	New Orleans, La.	124	77	3	2
Syracuse, N. Y.	78	46	5	2	San Antonio, Tex.	93	52	5	6
Trenton, N. J.	47	28	—	2	Shreveport, La.	31	20	—	3
Utica, N. Y.	25	18	1	4	Tulsa, Okla.	47	25	3	3
Yonkers, N. Y.	46	31	1	4	MOUNTAIN	449	255	10	16
EAST NORTH CENTRAL	2,387	1,392	94	71	Albuquerque, N. Mex.	24	11	—	1
Akron, Ohio	62	34	2	—	Colorado Springs, Colo.	35	22	—	8
Canton, Ohio	36	20	1	—	Denver, Colo.	90	48	3	4
Chicago, Ill.	699	383	26	14	Las Vegas, Nev.	23	12	—	—
Cincinnati, Ohio	146	100	5	5	Ogden, Utah	30	14	1	2
Cleveland, Ohio	155	102	6	6	Phoenix, Ariz.	118	65	3	1
Columbus, Ohio	129	76	8	3	Pueblo, Colo.	12	8	—	—
Dayton, Ohio	71	42	2	2	Salt Lake City, Utah	52	31	2	—
Detroit, Mich.	328	170	11	9	Tucson, Ariz.	65	44	1	—
Evansville, Ind.	33	25	—	1	PACIFIC	1,401	858	44	30
Fort Wayne, Ind.	48	27	2	5	Berkeley, Calif.	22	15	—	1
Gary, Ind.	37	16	2	5	Fresno, Calif.	42	22	3	—
Grand Rapids, Mich.	56	34	1	6	Glendale, Calif.	26	16	1	1
Indianapolis, Ind.	128	67	9	2	Honolulu, Hawaii	62	37	3	1
Madison, Wis.	30	16	—	3	Long Beach, Calif.	94	54	1	5
Milwaukee, Wis.	137	95	2	2	Los Angeles, Calif.	400	248	13	7
Peoria, Ill.	47	34	2	1	Oakland, Calif.	43	27	2	1
Rockford, Ill.	46	27	3	3	Pasadena, Calif.	22	14	—	—
South Bend, Ind.	24	15	4	1	Portland, Oreg.	135	90	4	2
Toledo, Ohio	110	67	5	2	Sacramento, Calif.	44	27	—	—
Youngstown, Ohio	65	42	3	1	San Diego, Calif.	109	64	4	2
WEST NORTH CENTRAL	671	426	27	15	San Francisco, Calif.	164	86	5	4
Des Moines, Iowa	36	26	1	1	San Jose, Calif.	54	36	4	4
Duluth, Minn.	23	18	1	1	Seattle, Wash.	112	74	1	—
Kansas City, Kans.	39	23	2	5	Spokane, Wash.	40	28	2	2
Kansas City, Mo.	119	75	7	—	Tacoma, Wash.	32	20	1	—
Lincoln, Nebr.	5	2	—	—	Total	10,642	6,450	319	355
Minneapolis, Minn.	82	49	4	1	Expected Number	13,016	7,745	466	490
Omaha, Nebr.	71	45	1	1	Cumulative Total (includes reported corrections for previous weeks)	658,058	387,478	24,635	25,658
St. Louis, Mo.	217	135	7	2					
St. Paul, Minn.	51	33	4	1					
Wichita, Kans.	28	20	—	3					

\* Estimate based on average percent of divisional total

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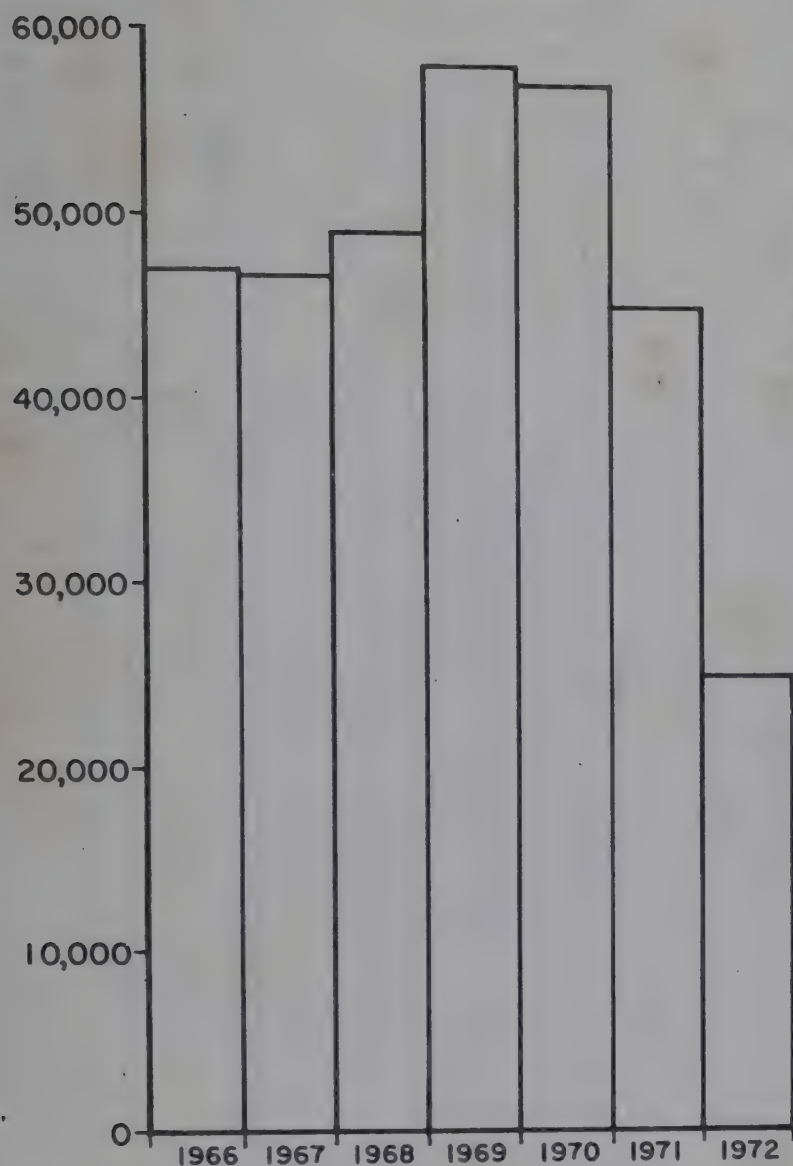
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### SURVEILLANCE SUMMARY

#### RUBELLA — United States, 1972 and the First 26 Weeks of 1973

In 1972, a total of 25,507 cases of rubella were reported in the United States, a decline of 43% from the 45,086 cases reported in 1971 and 50% below the average number of cases reported in each of the years 1967-1971. Rubella incidence has decreased steadily from 1969, when rubella vaccine was first licensed, through 1972 (Figure 1).

Figure 1  
REPORTED CASES OF RUBELLA  
UNITED STATES, 1966-1972



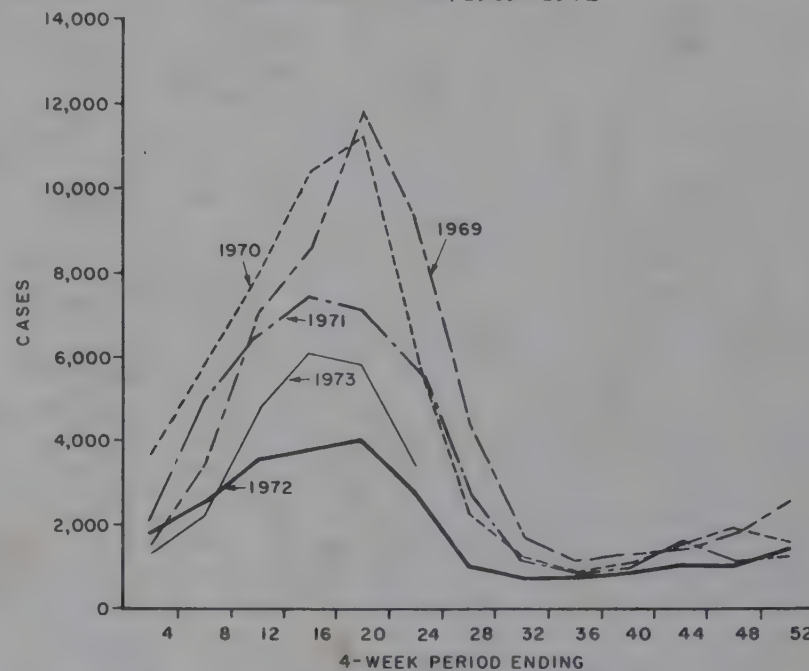
In the first 26 weeks of 1973, rubella activity increased 29% (24,754 cases reported nationwide) over the same period in 1972 (19,132 cases). Thirty-two states experienced increases in rubella cases during the first half of 1973; many of these states reported outbreaks among unvaccinated high school and college populations (MMWR, Vol. 22, Nos. 12, 13, 20, 48).

The seasonal pattern of rubella remains unchanged, with incidence increasing in January, reaching a peak by April or May, and dropping to a low level by August (Figure 2).

In 1969, a study of the age-specific incidence of rubella in Illinois (exclusive of Chicago), Chicago, Massachusetts, and New York City for the 5-year interval 1963-1967 showed that 56.6% of reported rubella cases occurred in children under 10 years of age (1). Over 92% of the cases occurred before the age at which most adolescents have finished high school.

Data on age-specific rubella incidence was collected from these same 4 areas for the period 1969-1972. In each area the percentage of children in the 1- to 9-year age group

Figure 2  
REPORTED CASES OF RUBELLA, BY 4-WEEK PERIODS  
UNITED STATES, 1969-1972



who had received rubella vaccine was at least as great as the nationwide percentage of children 1-9 years who had received vaccine (54%): Massachusetts 79%, Chicago 71%, Illinois (exclusive of Chicago) 57%, and New York City 54%. The rubella incidence in 1969-1972 in these 4 areas averaged 12.8% less per year than the incidence reported in the period 1963-1967. The decrease in incidence was similar for each age group, ranging from 6% to 14% of the 1963-1967 incidence.

In 1972, 33 cases of congenital rubella syndrome were reported to CDC, 50% fewer than the cases reported in each of the 2 preceding years. In the first 26 weeks of 1973, 15 cases were reported, 5 fewer than at the same time in 1972. Only 24 states have reported cases of congenital rubella syndrome in the past 4 years.

Through December 31, 1972, more than 45.8 million doses of rubella vaccine had been distributed in the United States since its licensure in 1969. Over 8 million doses were sold by the manufacturers in both 1971 and 1972, fewer than the 29 million doses distributed in the 1969-1970 period, but sufficient to increase immunization levels in the 1-12 year age group. A large proportion of the vaccine, 30.5 million doses, has been administered in publicly funded programs, with 5.3 million doses given through these programs in 1972. (Reported by the Perinatal Virology Unit, Bureau of Laboratories, and the Investigations and Evaluations Section, Field Services Branch, Bureau of Epidemiology, CDC.)

#### Reference

1. Witte JJ, Karchmer AW, Case G, et al: Epidemiology of rubella. *Amer J Dis Child* 118:107-111, 1969

A copy of the original report from which these data were derived is available on request from

Center for Disease Control  
Attention: Chief, Investigations & Evaluations Section  
Field Services Branch  
Atlanta, Georgia 30333

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	52nd WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 52 WEEKS		
	December 29, 1973	December 30, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	36	67	77	4,646	4,281	4,374
Brucellosis	2	10	7	178	193	218
Chickenpox	1,732	3,188	---	161,903	140,627	---
Diphtheria	5	6	6	214	125	214
Encephalitis, primary:						
Arthropod-borne and unspecified	10	27	26	1,496	1,135	1,455
Encephalitis, post-infectious	2	6	6	269	280	328
Hepatitis, serum (Hepatitis B)	121	125	125	8,078	8,837	7,347
Hepatitis, infectious (Hepatitis A)	578	762	762	51,523	54,442	54,442
Malaria	3	5	52	239	811	2,853
Measles (rubeola)	198	521	365	26,686	31,580	31,580
Meningococcal infections, total	12	19	32	1,349	1,332	2,491
Civilian	12	19	32	1,323	1,284	2,166
Military	---	---	---	26	48	223
Mumps	936	1,092	1,491	69,087	71,337	102,195
Rubella (German measles)	100	245	281	27,928	25,169	48,446
Tetanus	---	5	3	88	122	138
Tuberculosis, new active	338	772	---	30,937	33,901	---
Tularemia	---	3	2	157	147	164
Typhoid fever	9	5	5	628	380	380
Typhus, tick-borne (Rky. Mt. spotted fever)	---	7	2	635	528	405
Venereal Diseases:						
Gonorrhea	11,158	12,508	---	823,380	756,804	---
Syphilis, primary and secondary	241	469	---	25,122	25,740	---
Rabies in animals	26	75	63	3,285	3,985	3,363

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	7
Botulism:	32	Paralytic:	5
Congenital rubella syndrome: Colo. 2, Kans. 7	47	Psittacosis: Calif. 1	26
Leprosy: * Calif. 1	135	Rabies in man:	1
Leptospirosis: Colo. 1	39	Trichinosis: Pa. 2	79
Plague:	2	Typhus, murine:	31

\*Delayed reports: Leprosy: Tex. 2

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In addition to the established procedures for reporting morbidity and mortality the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

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